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# Necessary competencies and learning experiences for hospitality educators: a Delphi study

John Thomas Canterino  
*Iowa State University*

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**Necessary competencies and learning experiences for hospitality  
educators: A Delphi study**

**Canterino, John Thomas, Ph.D.**

**Iowa State University, 1990**

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Ann Arbor, MI 48106



**Necessary competencies and learning experiences  
for hospitality educators: A Delphi study**

by

**John Thomas Canterino**

**A Dissertation Submitted to the  
Graduate Faculty in Partial Fulfillment of the  
Requirements for the Degree of  
DOCTOR OF PHILOSOPHY**

**Departments: Family and Consumer Sciences Education  
Hotel, Restaurant, and Institution  
Management  
Co-majors: Home Economics Education  
Hotel, Restaurant, and Institution  
Management**

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Signature was redacted for privacy.

Signature was redacted for privacy.

**In Charge of Major Work**

Signature was redacted for privacy.

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**Iowa State University  
Ames, Iowa**

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## CHAPTER I

## INTRODUCTION

Prior to the late 1960s, a chief complaint among researchers involved with the area of educator effectiveness was the lack of definitive information describing the characteristics of effective educators, effective teaching, and other related issues. Ryans (1949) stated, "it is sometimes embarrassing to reflect that we who purport to be teachers, teachers of psychology and education, are relatively incapable of describing the requirements of effective teaching" (p. 60). Additionally, according to Biddle (1964), "few facts seem to have been established concerning teacher effectiveness, no approved method of measuring competence has been accepted, and no methods of promoting teacher adequacy have been widely adopted" (p. 2).

Literature reviews reveal that the greatest problem in trying to define teacher effectiveness is in agreeing/disagreeing over what are meaningful and measurable criteria of effectiveness. According to Gage (1963), the identification of these competencies would result in a definition of an effective educator. These competencies would also help bring about desired changes in student behavior and achievement of certain desirable educational goals. Recent research studies have dealt with the subject matter of teacher effectiveness; however, the old complaints which underlie most of these studies, "that no one

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knew what good teaching was", should no longer be considered as valid. The works of Rosenshine (1971), Hunter (1976), Denham and Lieberman (1980), McGreal (1983a;b), and others have made inroads into describing how effective education relates to learners. McGreal (1983b) stated, "we are at a time when we know more about teaching and its impact on student learning than we ever have before" (p. 4). According to Heitzmann (1975), many educational researchers still believe that the necessary behaviors and skills of teachers can neither be identified nor do such studies show a pattern. Heitzmann (1975) stated further that,

adherence to this negative position results in a line of thinking that states--'it is no use researching this field as it will be unproductive.' Obviously additional research is needed--no doubt proper methodological procedures will yield additional knowledge about the characteristics and procedures of successful classroom teachers. (p. 299)

### Hospitality Education

One of the primary goals of hospitality education graduate programs is the preparation of highly-qualified hospitality educators. Educator competencies have become a major if indirect basis for determining the effectiveness of hospitality programs and hospitality educators. The movement towards accreditation of hospitality programs and the accountability movement within the hospitality profession demand delineation and clarification of

competencies to be used as the basis of evaluation of hospitality educators and their effectiveness.

Researchers have studied many different areas regarding faculty effectiveness in general. Miller (1987) researched studies in the following related areas: academic preparation, scholarly productivity, applied professional experience, continued contact with the profession, competence in the area of specialization, and teaching effectiveness. Centra (1977) found that the presence of academic degrees was frequently mentioned as a critical factor in faculty evaluation. Wachtel and Pavesic (1983) believed that too much emphasis has been placed upon the doctoral degree and not enough on industry experience. In juxtaposition with this debate over the importance of a terminal degree, Calnan et al. (1986) found that administrators of hospitality management education programs prefer faculty with doctoral degrees. Olsen and Reid (1983) recognized specialization as being a concern for the hospitality management educator and suggested that faculty hold terminal degrees in an area of specialization such as business or finance.

According to Centra (1979a), Creswell (1985), and Nelson (1981) only a minority of university faculty overall were involved in research and publication on a regular basis. However, Rutherford (1983) found that hospitality management faculty published at a somewhat higher rate than the academic community in general. Also important in evaluating university faculty is professional societal activity and involvement (Centra 1979b).

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Teaching behavior is scrutinized when evaluating teacher or educator effectiveness. Eble (1970) and Seldin (1975) identified behaviors that were used by evaluative personnel to assess teacher effectiveness. Waskey (1979) suggested that hospitality students perceived their instructor to be more effective if he/she continued to update information by spending time in the industry. Wachtel and Pavesic (1983) and Waskey (1979) suggested that educators who are equipped with current industry knowledge would make better instructors. Powers and Riegel (1984) agreed that industry experience is useful. There are weaknesses, new responsibilities, and needed changes in hospitality education. Hospitality educators must be committed to the revision of their programs and courses because, as Loftis (1970) stated, "to produce teachers who are committed is to provide the optimum conditions of growth for all those to be taught" (p. 6).

In keeping with the above philosophy and the researcher's belief in the need for the continuing revision of necessary competencies, the aim of this study was to identify some of the knowledge and skill competencies needed by an effective hospitality educator and some learning experiences that would be appropriate for acquiring those competencies. It is anticipated that the identified competencies and learning experiences will be used as a further basis for revision of subject matter content within hospitality education programs at the graduate level, to provide guidelines for developing educative

criteria, and to provide direction for growth of individuals within hospitality education.

#### Analysis of the Problem

Many research studies that have focused on the study of teacher/teaching effectiveness have tried to identify criteria effectiveness. Attempts have been made to describe those attributes which tend to make an educator superior to his/her peers. The subject areas within most of these studies are non-specific, however. Weber and Everett (1970) concluded that research studies in the area of vocational and technical education related to specific educator competencies were limited. The literature related specifically to hospitality educator effectiveness is minimal. Each study stands alone with regards to a single competency being of importance to the hospitality industry. A comprehensive study on what are the necessary competencies has not been completed. However, this researcher did locate one study on the competencies needed by vocational teacher educators (Brown, 1980). Brown's sample included members from each of the six vocational areas including home economics education. No significant differences existed in the rating of 82 percent (60) of the identified competencies among the six different service areas.

After reviewing literature on competency-based teacher education, two concerns exist. Hampton and Dewald-Link (1982) stated that (1) there is a need for developing and updating existing competency lists

which reflect the changing job of teaching; and (2) the assurance that these lists describe the actual competencies which are needed in the field.

No list of competencies can be construed as being all inclusive or final as it can only reflect the beliefs and attitudes at the time the competencies were identified. McGreal (1983b) stated that common sense tells us which educators are poor and ineffective and detrimental to the needs of the learner; for those educators, though they are a small minority, there is little chance of change. Examples of mediocrity in teaching have been evidenced by many, and it is for this larger group that competencies must be delineated which describe knowledge and skills that are most important to the complex tasks of guiding and directing student learning. Additionally, a means for evaluating the progress and improvement of educators must be identified and developed so as to insure that the needs of the learner are being achieved at some minimum standard.

#### Research on Teaching at the College Level

Research on teaching at the college level lends credence to the significance of this study. Centra (1977) and Costin (1978) stated that researchers and educators are concerned about the improvement of college instruction, and there appears to be general agreement that if improvement is to occur, more research is needed. Earlier research had been predominantly of a statistical nature. For example, diverse methods of presenting information (e.g., video,



computer-assisted, lecture, etc.) were studied to find which had the most positive impact on learning as measured by higher mean scores and lower standard deviations. Demographic data were compiled on the socio-economic conditions of the learners and environment, and what effect this had upon learning. Biddle (1964) reviewed the literature on observational ratings and suggested that this method was the most outstanding technique for learning about pupil response. Costin, Greenough, and Menges (1971) reviewed research concerned with the reliability, validity, and usefulness of student evaluations and how they affect effective teaching. Cohen (1981) analyzed 41 studies on the relationship between student ratings of instruction and student achievement. Wotruba and Wright (1975) summarized 21 studies in which different groups were asked to describe the qualities of effective teachers. The resulting list according to Centra (1979a), is typical of the results of studies of this type:

- ...communication skills
- ...favorable attitudes towards students
- ...knowledge of subject matter content
- ...good organization of subject matter content
- ...good organization of course content
- ...enthusiasm about the subject matter content
- ...fair and objective in evaluations and grading
- ...varied teaching methods
- ...good speaking ability.

In summary, the use of observations, questionnaires, ratings, and other forms of evaluation has been standard practice for measuring educator effectiveness. However, the research does not disprove the fact that there is no real way in which to describe the characteristics, traits, and qualities of an effective educator

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unless one is willing to make a value judgment. Barr (1961) suggested that criteria for measuring educator effectiveness are chosen from a personal preference of the evaluator. Centra (1979b) further states that effective educators appear to possess certain talents which are valued by the institution to which they are attached.

However, the effectiveness of an educator is dependent on more than a list of effectiveness criteria. Mitzel (1960) defined three criteria (product, process, and presage), that if measured together, may be sufficiently comprehensive to cover most criteria with respect to different educator characteristics and qualities for different teaching situations. Barr (1950) stated that an educator was thought of as a director of learning, a counselor of students, a participant on policy advising, a participant in professional groups, a participant in community activities, and a friend.

Effective educators are no more than an abstraction of what we perceive to be an effective educator. A value judgment is made as to what is good or poor teaching. As suggested earlier, research offers us various criteria which are used to define an effective educator, but similar behaviors may not produce the exact same or similar results in different classes of learners. Rabinowitz and Travers (1953) stated that although there are many students in a classroom there is only one educator. That educator will have a different effect on each student. Some will progress while others will not. While the research helps, it does not present a complete solution to

the problem of defining exactly what an effective educator is. This study is not aimed at solving the problem either, but it is an additional step towards describing some of the knowledge and skill competencies and learning experiences to acquire the identified competencies of an effective hospitality educator. The significance of this study in relation to previous "effectiveness" research concerns not only the information gained but also the methodological technique used. The Delphi technique encourages individual panel members to think and reflect on the competencies and learning experiences in a systematic and detailed manner. According to Helmer (1968), "its unique feature and potential merit lie in the requiring of experts to consider the objections and concepts of other group members" (p. 116).

Delphi participants must focus their thoughts on making certain judgments, decisions, and opinions and thus evaluate not only their own perspective but that of the other participants as well. The information gained from this study may be useful in the revision of graduate-level subject matter content in hospitality programs, in providing a basis for the development of evaluative criteria, and in providing direction for continued professional growth of the hospitality educator.

#### Purposes of the Study

The purposes of this study were:

1. To identify and gain consensus on knowledge and skill

competencies that are needed by an effective hospitality educator, and to ascertain if groups converge.

2. To identify and gain consensus on learning experiences that will enable the acquisition of the identified knowledge and skill competencies.

The following tasks were undertaken to accomplish the stated purposes:

1. Construct a panel of expert hospitality educators.
2. Conduct a three-round Delphi study to identify the knowledge and skill competencies and appropriate learning experiences that are needed by an effective hospitality educator.
3. Encourage convergence of opinion among the panel with regards to the identified competencies and learning experiences.
4. Rank order the competencies and learning experiences according to the modal and mean responses from the Round III questionnaire.

#### Assumptions of the Study

For purposes of this study, the following assumptions were made:

1. There are certain competencies and learning experiences needed by an effective hospitality educator.
2. The responses made by the participants will reflect honest and careful consideration of the information sought.
3. The persons being surveyed are experts.
4. The nominated experts will be able to identify various competencies and learning experiences needed by an effective hospitality educator.
5. If the nominated experts agree on certain competencies and learning experiences and converge closer to the central tendency, the findings will be more readily accepted by hospitality education programs and hospitality educators.

### Limitations of the Study

The following are recognized as limitations of this Delphi study:

1. The results of this Delphi study are limited by the number of competencies and learning experiences identified by the panel.
2. The study was limited to hospitality educators in 4-year programs in the United States of America.

### Definition of Terms

- Competency.** A knowledge or skill needed by an effective hospitality educator.
- Consensus.** The end product of expert concurrence on an event or topic statement, identified by experts, where no formal agreement had existed prior to the Delphi study.
- Convergence of opinion.** A measure of agreement toward a common conclusion or result in the succeeding rounds of a Delphi study as opposed to the second-round questionnaire.
- Expert hospitality educator.** One of a group of hospitality educators nominated most often according to specified standards or criteria.
- Learning experience.** An experience or activity which provides for continued development of an individual. It helps to promote the acquisition of necessary competencies.
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**Delphi technique.** A carefully designed program using rounds of sequential individual questionnaire iteration interspersed with statistical information and opinion feedback (Helmer, 1967), on complex matters for which precise information is not available.

**Effective.** Possessing certain competencies that enable an individual to perform the necessary functions as applied to student achievement and performance.

**Expert.** An individual recognized by peers as being outstanding within his/her field.

## CHAPTER II

## REVIEW OF LITERATURE

The following literature review is concerned with two topics:  
(1) an analysis and explanation of the Delphi technique; and (2) the research related to how Delphi studies have been used in an academic arena.

## The Delphi Method: Explanation and Analysis

According to Kaplan, Skogstad, and Girschick (1950), prior to the development of the Delphi method, the RAND corporation was concerned with the problem of how to use group information and opinion more effectively. Another concern was how to use most effectively a statistical treatment of these individual opinions. Quade (1967) documented the first known use of the Delphi method:

The first experiment with the Delphi process (about 1948) used several racing forms in an attempt to improve the prediction of horse race outcomes. Although the experiment showed some promise, criticism of its subject matter and some obvious defects set the effort back about ten years or so. (p. 2)

The development of the Delphi method is usually attributed to Dalkey and Helmer when they first introduced questionnaire iteration with controlled feedback in a series of studies in the early 1950s. According to Dalkey and Helmer (1963), the first significant use of

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the Delphi method occurred in 1953. The object of this study was to obtain the most reliable consensus of opinion from a group of experts on certain defense problems. The Delphi method remained relatively unknown outside of defense circles until Gordon and Helmer (1966) published the Report on a Long Range Forecasting Study.

The Delphi method was designed to deal with information that was not confirmed enough to be knowledge, but was more accurate and reliable than speculation. The Delphi has certain characteristics that distinguish it from traditional or conventional face-to-face interactions of individuals.

### Confidentiality

Delphi participants do not know who else is in the group. Interaction among Delphi panel members is accomplished by a series of questionnaires with confidential feedback. The possibility of Delphi panel members attributing certain specific opinions to other members is thus avoided. Each opinion will be evaluated on its own merit regardless of the originator's identity, thus alleviating any impact that peer pressure may play in the question or study. Dalkey (1969b) and Martino (1983) mention that members of the Delphi study may also undertake to change their opinion without publicly acknowledging the fact.



### Iteration with controlled feedback

Group interaction is accomplished through successive rounds of questionnaires. Information is fed back to Delphi participants so that they are informed only of the current status of the group's collective opinion and arguments regarding the positive and negative aspects of views about the item being studied. This allows for distracting extraneous comments to be removed by the researcher from questionnaires that follow. Martino (1983) suggested, "the primary effect of this controlled feedback is to prevent the group from taking a life of its own" (p. 17). The results of this process are that "the group is able to concentrate on the objectives of the study rather than winning the argument or reaching agreement for its own sake" (Dalkey, Rourke, Lewis, & Snyder, 1972, p. 24).

### Statistical group response

The use of a statistical definition of the responses of the group reduces group pressures for conformity compared to face-to-face interaction among the panel members. The statistical response includes the opinions of the entire Delphi group. This allows for the use of reporting the groups' responses as a single item with a statistic that describes the central tendency of the group and/or the dispersion around this central tendency (Dalkey, 1969b; Martino, 1983).

### The use and selection of experts

The Delphi method relies on the strength of informed intuitive judgment in areas where reliability or confirmed knowledge cannot be obtained (Weatherman & Swenson, 1974). This leads to the fourth characteristic, that of using experts. Dalkey, et al. (1972) stated: "the procedure is, above all, a rapid and relatively efficient way to 'cream the top of the heads' of a group of knowledgeable people" (p. 21).

Expert opinion is called upon when it becomes necessary to select among alternative courses of action, and when there is an absence of a theoretical body of knowledge that would single out one course of action as being the superior alternative. For some problems there exists a number of persons who are especially knowledgeable, competent, wise, capable, and who understand the nature of the problem being studied. These "experts" are able to do a better job of forecasting, making judgments, and offering an informed opinion than is the layperson or non-expert. According to Helmer (1966a), the degree of expertise displayed in the predictions, recommendations, or opinions will be revealed in the relative frequency with which the predictions and pronouncements are confirmed as being deemed appropriate or correct by later events.

Proponents of the Delphi method have defined the term "expert" in various ways, and no single definition has been decided upon as being correct. However, similar aspects of the definition tend to occur;

knowledge, competence, intuition, and recognition by peers. Gordon (1971) defined an expert as "a person who is correct in his judgment about the likely outcome of events in inexact sciences" (p. 12).

Harmon and Press (1975) suggested that "when a variety of professionals in a field are polled about whom they regard as an expert, and the same individuals keep being mentioned, those individuals must be considered experts" (p. 5). Martino (1983) further states, "that peer judgment is usually the best criterion for identifying an expert" (p. 28).

The use of experts in the Delphi method is based on the premise that "two heads are better than one" and that, many heads are better than two. Dalkey (1969b) reported that in a number of experiments to measure the value of the Delphi procedure that the following occurs:

1. on the initial round, a wide spread of individual answers typically ensued;
2. with iteration and feedback, the distribution of individual responses progressively narrowed (convergence);
3. more often than not, the group responses (defined as the median of the final individual responses) became more accurate. (p. 20)

In order for the Delphi procedure to be of maximum value and to gain the most from expert opinions, there are three principles which should be fulfilled:

1. the experts must be selected wisely;
2. the proper conditions under which they perform must be created wisely;

3. if several of the experts hold a similar opinion or judgment, considerable caution must be used in deriving a solitary combined position for the entire Delphi panel (Helmer, 1968).

Several studies have been conducted comparing the accuracy of the Delphi procedure using expert and non-expert panels. In particular, Helmer (1968) reported on a study conducted at the University of California at Los Angeles in 1965 which ranked the responses of faculty regarding their competence with 20 business skills. Two medians were computed: one for the entire group as a whole and another for just those individuals who ranked themselves as being most competent with the skills. Subsequent evaluation of the results showed that the median of the experts compared to the true value of entire groups' median in over two-thirds of the cases.

#### Convergence of opinion

The object of the Delphi method is to obtain a consensus of opinion without bringing the individual panel members together in a face-to-face interaction. By controlled and rational exchange of iterated opinion, the Delphi method intends to encourage the participants towards a convergence (consensus) of opinion with regards to the problem being studied. According to Helmer (1968b), "a convergence of opinion has been observed in the majority of cases where the Delphi approach has been used" (p. 3). Martino (1983) stated,

general experience is that there is a convergence of the panel

estimates during the sequence of rounds. The panel members will usually have widely varying estimates on each event on the second round. However, as the panelists offer their reasons for shifting the estimates, the subsequent estimates tend to cluster near the preferred dates. This convergence results from actual transfer of information and interaction among the panel members.

(p. 20)

Delphi panelists are not forced into changing their opinions or judgments as they have just as much opportunity to stick with their original views as do members of a face-to-face group. Thus one advantage of the Delphi method is that the panelists can shift their positions without losing face when they read convincing arguments from other panel members.

#### Accuracy and reliability of the Delphi technique

Because the accuracy of a forecast, judgment, or decision is only as good as the expert opinions used to reach the conclusion, the proper issue then becomes is the Delphi method the best method for extracting this opinion from the group of experts. Accuracy has been studied in an effort to lend credence to this particular method of research. Dalkey's (1969b) work on the accuracy of the Delphi method as a group process reports the use of almanac-type questions for three reasons:

1. they were questions to which the panel did not know the exact answer but did have enough background information so that they could make an informed or educated guess;

2. the answers were verifiable and available;
3. the answers were numerical so that a wide range of answers could be expressed.

Dalkey (1969b) found studies that compared face-to-face interaction with the controlled feedback interaction of the Delphi method using almanac questions. He stated,

More often than not, face-to-face discussion tended to make the group estimates less accurate, whereas, more often than not, the anonymous controlled feedback made the group estimates more accurate....the median response of the questionnaire group was more accurate in 7 (out of 20) cases, and the consensus of the face-to-face group was more accurate in 3 (out of 20 cases).

(p. 22)

A question arises whether the task of estimating responses to almanac-type questions is similar to making short-term predictions or gathering expert opinion or judgment. Dalkey (1969b) stated,

We can say that the general type of information question used had many of the features ascribable to opinion; namely, the subjects did not know the answer, they did have other relevant information that enabled them to make estimates, and the route from 'other relevant information' to an estimate was neither immediate nor direct. (p. 19)

However, he suggested that this observation should be confirmed with the use of more controllable exercises. With regards to the reliability of the Delphi method, Dalkey, et al. (1972) stated:

In general, one would expect in the area of opinion, group responses would be more reliable than individual opinions, in the simple sense that two groups of equally competent experts would be more likely to evidence similar answers to a set of related questions than would two individuals. This similarity can be measured by the correlation between the answers of the two groups over a set of questions....It is clearly desirable for a study that another analyst arrive at similar results. (p. 18)

Because experts do not always agree on certain issues, the possibility of two groups giving different forecasts, judgments, decisions, or opinions is a possibility. If this were to occur often, then the Delphi method could be shown as being somewhat unreliable. Martino (1983) reported on some of Dalkey's work related to the reliability of the Delphi method. Using almanac-type questions, Dalkey took first-round responses of a particular study and treated them as a population from which he then drew samples of various sizes. For each of the samples he obtained the median and the correlation between the median and the true answer. The mean correlation between this median and the true answer increased by increasing the sample size up to a certain point. For Delphi panels comprised of as few as 11 members this correlation exceeded 0.70. Martino (1983) concluded by suggesting that Delphi panels comprised of 15 members, if truly representative of the expert community on some topic, is unlikely to produce forecasts, judgments, decisions,

or opinions that differ markedly from those of another equally expert panel of the same size.

#### Application of the Delphi method

Although the Delphi method is often labelled as a forecasting technique, Linstone and Turoff (1975a) indicated a variety of areas which were appropriate for the Delphi method:

- ...gathering current and historical data not accurately known or available.
- ...exposing priorities of personal values, social goals, etc.
- ...evaluating possible budget allocations.
- ...planning university campus and curriculum development.

#### Delphi studies of the past

One of the first Delphi studies was conducted by Dalkey and Helmer (1963) in 1953. The project was designed to use expert opinion from a Soviet perspective with regards to estimating the number of A-bombs necessary to destroy the United States' munitions industry. Baran (1971) used a Delphi study to gain a better understanding of the factors that will have an impact on the demand for newsprint in the next 30 years. Bedford (1972) used a panel of housewives to estimate future acceptance of communication services in the home (e.g., electronic banking). Enzer (1971) conducted a Delphi study to determine the most probable trends in residential housing in the next 15 years. Schneider (1972) used the Delphi study to determine factors in the growth rate of the Seattle Central Business



District, and Jillson (1975) used a Delphi study in developing a range of possible national drug abuse policy options.

#### Studies in education using the Delphi method

Helmer (1966b) reported that the Delphi method can be applied to all phases of educational planning at the federal, state, local, or institutional level. The Delphi method has been used to define commonly used educational terms and to establish targets and goals for a variety of teaching and learning endeavors. Rasp (1973) and Weaver (1971) suggested that the Delphi method may be a useful instrument for something more important than it was designed for, namely a general teaching strategy. Weaver (1971) indicated that the Delphi method might best be applied in education as follows:

1. a method for studying the process of thinking about the future;
2. a pedagogical tool or teaching tool which forces people to think in a more complex way than they ordinarily would;
3. a planning tool which may aid in probing priorities held by members and constituencies of an organization. (p. 271)

Judd (1972) reviewed the use of the Delphi method in education and suggested that its use has been in three areas: the formulation of educational goals and objectives, curriculum and campus planning, and in the development of evaluative criteria. The Delphi method has also been used in the modelling of education systems (Dodge & Clarke, 1977).

One of the first uses of the Delphi method in educational

planning was conducted by Helmer (1966b). A list of 93 educational innovations were compiled, and the Delphi participants were asked to allocate a budget consisting of 10 million dollars for a 5-year time period. Gordon and Sahr (1969) sought to gain a consensus opinion about prospective developments which may have an impact on educational administration. Three questionnaire iterations were conducted during the study. Among the conclusions were predictions of increasing social turmoil, and anticipation of spreading teachers' unions and bargaining practices along with a continued emphasis on technology on education. Waldera (1973) used the Delphi method to "generate a list of anticipated roles perceived to be emerging for educators within the next 30 years and to ascertain what events might cause such roles to emerge" (p. 4).

Dalkey and Rourke (1971) used the Delphi method in processing student judgments about "quality of life" issues as perceived by the student. The identified factors were generated by the students themselves. Quality of life factors which rated highest in importance were "love, caring, and affection". Education factors rated highest in importance were "ability to learn, reasoning ability, ability to think, and critical ability". The Delphi method has been used in specialized areas of education. For example, Duszynski (1981) aimed at identifying those writing skills which should be developed in a community college program. Hill (1974) used a modified Delphi method to develop a unit-based curriculum, which was based on the converged opinions of a panel of experts.

One of the things that hampers reviewing the use of the Delphi method in higher education is the reluctance of administrators responsible for its employment to permit identification of their institution by researchers who wish to publish their findings. Judd (1972) stated:

Perhaps these schools are observing Dr. Frederick Bolman's advice to 'change more and talk less about it,' given in address to administrators in which he warmly endorsed the use of Delphi in planning for change. However reticent or ashamed administrators may be to admit their use of the Delphi technique in higher education, its use continues to grow. (p. 177)

#### Sources of Delphi bibliographies

The above-mentioned studies show the diversity of uses of the Delphi method in educational settings. They do not represent an exhaustive or comprehensive list of the Delphi method and/or its uses. For more information on the Delphi method there are a number of bibliographies and reviews that may be of further value:

Linstone, H. A., and Turoff, M. (1975a), The Delphi Method: Techniques and Application; Weaver, T. (1972), Delphi, A Critical Review; Uhl, N. (1971), Identifying Institutional Goals; Sackman, H. (1975), Delphi Critique. The RAND Corporation in Santa Monica, California has an excellent bibliography on the Delphi method and its use in long-range forecasting and planning.

### Studies on teacher competence using the Delphi method

Due to the lack of agreement on a theory base as to a solitary competency being superior, the Delphi method seems to be an obvious method for finding consensus on teacher competencies or teacher effectiveness. One of the earliest uses of the Delphi method to obtain consensus about effective college educators was conducted by Cochran, Crumley, and Overby (1970). They took a list of 19 teacher characteristics and asked four Delphi panels (two students and two faculty) to evaluate them. Two of the groups (one student and one faculty) assigned relative values by dividing 1,000 points among the characteristics. The other two groups assigned absolute values on a 1 - 7 scale to each of the characteristics. The educator characteristics were placed in a rank order according to their assigned importance in successful college teaching and the rank order correlations were computed between the rankings based on the second questionnaire iteration. The correlation between the ranks obtained by assigning relative values versus absolute values were 0.85 and 0.88 respectively. Cochran et al. (1970) concluded that the Delphi method showed promise in determining consensus on evaluation criteria.

Fox and Brookshire (1971) queried 91 faculty members to list what they "considered to be the ingredients of effective college teaching" (p. 37). After screening for ambiguous and duplicated statements on the first-round questionnaire, a final list comprised of 195 different statements or key words was identified. After four

rounds of Delphi iterations, five major characteristics of effective teaching were defined:

1. Personal characteristics - friendly, mature, enthusiastic;
2. Interpersonal relationships - approachable, fair, honest;
3. Communication skills - rapport, relevant, open;
4. Professional qualities - attitudes, knowledge, preparation;
5. Technical skills of teaching - methods, grading, organization. (p. 38)

They concluded that "this study has demonstrated the usability of the Delphi technique in areas that heretofore have been difficult to study due to problems of definition". (p. 40)

Buff (1976) conducted a Delphi study in which 22 teacher educators were asked to identify competencies which educators should be capable of demonstrating in a competency-based education program. Brown and Bice (1976) conducted a Delphi study to determine the performance requirements that are expected of supervisors of vocational home economics education programs which may be used as a guideline in developing a competency-based curriculum for preparing these professionals.

One study using the Delphi method was particularly relevant to this researcher's study. Rossman and Bunning (1978) attempted to assess the knowledge and skills which would be needed by adult educators of the future to successfully and effectively fulfill their roles. From their review of the literature they concluded that although many authors had suggested skills, knowledge, attitudes, and other competencies necessary to enhance the effectiveness of an adult educator, no study had directly addressed itself to the needed

competencies of the future adult educator. The purpose of the study was "to determine a core of common skills and knowledge which adult educators of the future would need to gain in order to perform their job adequately" (p. 142). The study used a Delphi procedure with a national random sample of 141 university professors of adult education. The first questionnaire asked the panel to identify necessary knowledge and skills for the coming decade. The second questionnaire asked the Delphi panel to rate the responses on a five-point Likert-type scale. The third questionnaire fed back the respondents' modal consensus of round two responses and asked the panelists to either join the consensus or to defend their dissenting point of view. The final questionnaire asked the respondents to choose the learning experiences which would be most appropriate in acquiring the knowledge and skills rated of highest priority in round three. Knowledge and skill competencies rated most highly included skill in diagnosing educational needs of the individual and knowledge of the ever-changing nature of adults and their needs. They reached the following conclusions:

1. minority opinions were relatively insignificant when compared with the overall consensus rate of more than 80 percent;
2. the adult educator of the future was viewed as possessing an increasing variety of roles and sub-specialties;
3. the best method for the adult educator to acquire the recommended skills and knowledge competencies was practical, "on-the-job", work experience combined with selected university-based experiences.

Many other studies involving teacher effectiveness have used the Delphi method. Copeland (1977) identified teacher competencies for evaluating industrial arts student teachers, while Simpson and Brown (1977) used a Delphi study to validate science teaching competencies published by the National Science Teachers Association. Cheney (1972) used a Delphi study with nationally-known business education leaders to identify the characteristics and behaviors of effective student teachers in business. Starr (1975) determined through the use of the Delphi method a profile of teaching competencies for a first-year teacher. Brown (1972) determined the characteristics of effective business teachers, whereas Rhodes (1977) found the Delphi method successful in determining those competencies necessary for community college educators in Tennessee. Torres-Stanovik (1981) used the Delphi method to determine the attributes of effective teaching which should be included in a teacher evaluation program.

While this researcher found much literature describing what the Delphi method is and how to use it, there was a minimal amount of study done on the competencies of a hospitality educator. This researcher perused the literature in related areas of effective hospitality educators and programs. Astin (1985) and Adler (1985) studied hospitality educator effectiveness. Rutherford (1984) studied the implications of program proliferation and publishing pressure in regards to the hospitality educator. Sapienza (1978), Dermody (1968), Olsen and Reid (1983), and Pavesic (1983) did studies on hospitality curricula and/or programs. Literature relating to

accreditation and student perception were also studied. Guyette (1981) and Beckmen (1970) studied the effect of student perceptions in regards to the effectiveness of an educator. While there is literature that describes characteristics of an effective hospitality program, curriculum, and student, there is nothing specifically related to the necessary traits of an effective hospitality educator.



### CHAPTER III

#### METHODS AND PROCEDURES

The purposes of this study were (1) to identify and gain consensus on knowledge and skill competencies that are needed by an effective hospitality educator, and to ascertain if groups converge; and (2) to identify and gain a consensus on learning experiences that will enable the acquisition of the identified knowledge and skill competencies.

##### Questionnaire Development

A questionnaire was developed in a sequence of steps. The literature was perused to see what instruments had been developed prior to this study. There was evidence of an iteration of rounds approach with a focus on converging or diverging with regard to specific areas of content. After accepting this schema the researcher decided to utilize a format where the "experts" themselves identified those competencies, skills, and learning experiences which were to be rated later as to degree of importance. The researcher felt that this procedure would serve as a mechanism for validation of the instrument used in this study. After analyzing the literature it was decided to use prompts to help the panel to focus upon what was being asked in each statement. Telephone conversations with academicians and industry personnel led to issues of importance which

were used as prompt examples in the subsequent questionnaires in the study.

### Pilot Test

Because the purpose of the study was to identify pedagogical competencies rather than hospitality subject matter competencies, and because it was anticipated that the first round of the Delphi study would be a formidable task for the participants, it was decided to undertake a pilot test of the first round of the Delphi study. However, the sample panel members were not told that they were a pilot test group nor were they asked to participate in the actual Delphi exercise.

Twenty hospitality educators were randomly chosen from a 1988 listing of the Council on Hotel, Restaurant, and Institutional Education (CHRIE). Only those educators listed as teaching at four-year hospitality programs within the United States were included in the pilot study. The pilot test questionnaire was mailed on March 10, 1989 (Appendix A). Sixteen of the pilot sample returned the questionnaire for a response rate of 80 percent. In the pilot test the respondents identified pedagogical competencies rather than hospitality content competencies. The high response rate indicated that there was a willingness to answer a difficult open-response questionnaire.

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### Selection of the Delphi Panel

The first step in identifying the Delphi panel for this study, was the identification and selection of a group of experts. The participants or panel for the study included hospitality educators who were nominated by their peers in hospitality education. In order to identify a list of hospitality educator experts, letters of inquiry were mailed to a random sample of hospitality educators identified from the 1988 list of CHRIE members. The pilot test sample was excluded from the list of members, which left 396 names. A random starting number was generated from a random number table and every fourth member thereafter was selected which provided 100 names. The letters of inquiry, mailed on March 24, 1989, explained the purposes of the study and asked each hospitality educator to submit the names and addresses of up to five hospitality educators whom they considered as outstanding and who met at least two of the following criteria:

1. Has shown excellence in some area of hospitality education;
  2. Has had 5 or more years of experience in hospitality education;
  3. Has published scholarly papers or materials of use to hospitality educators;
  4. Is an editorial board member of a recognized education, home economics, or hospitality-related journal;
  5. Has been recognized for outstanding scholarship or teaching;
  6. Has held an official position in a national professional society in hospitality education (Appendix B).
-

After receiving 67 (67 percent) of the nomination forms from the sample (Appendix B), the researcher chose the 100 hospitality educators who had been nominated most frequently. Fifty-eight hospitality educators were nominated two or more times and the remaining 42 were randomly selected from those who were nominated once. An additional four nomination forms were received after the cut-off date and were excluded from consideration. One hundred forty-one names were submitted by the 67 nominators as being outstanding hospitality educators.

A slip of paper was also enclosed with the letter of inquiry and nomination form (Appendix B). Subjects who wished to receive a copy of the results of the study might retain their anonymity by completing their name and address and returning the slip in a separate envelope. Fifty-nine (88 percent) of those who returned the nomination form returned the slip of paper. Fifty-six of those 59 returned the slip of paper with the nomination form, which indicated that they did not wish to preserve their anonymity.

#### Round I

The Round I questionnaire asked participants to identify what they believed were the knowledge and skill competencies needed by an effective hospitality educator and what they believed were the appropriate learning experiences for acquiring or obtaining the identified competencies. These three questions were asked of the Delphi panel:

1. List five (5) knowledge competencies you consider especially needed by an effective hospitality educator. Knowledge is defined here as the things one needs to know or be aware of, but for this study does not include knowledge of content material such as purchasing, the relationship between equipment specifications and restaurant design, etc.

Examples from literature, academicians, and industry personnel:  
 Familiarity with current research in hospitality education.  
 Awareness of the impact of social change on hospitality education.

2. List five (5) skill competencies you consider especially needed by an effective hospitality educator. Skills are defined here as the things one needs to be able to do, perform, or be proficient in.

Examples from literature, academicians, and industry personnel:  
 Skill in the use of microcomputer software related to hospitality education.  
 Ability to diagnose education needs of hospitality students.

3. List five (5) learning experiences you consider appropriate for obtaining or acquiring the necessary competencies. You do not need to correlate the learning experiences with your responses to question 1 and question 2.

Examples from literature, academicians, and industry personnel:  
 Conducting empirical research.  
 Industrial or corporate work experience.

On May 1, 1989, the researcher mailed a cover letter, which served as the invitation to participate in the study, and the Round I questionnaire to the 100 hospitality educators identified in the nomination process (Appendix C). On May 25, 1989 a follow-up letter was mailed to all hospitality educators who had not responded to the questionnaire (Appendix C).

Upon receipt of the Round I questionnaire responses, the researcher compiled and adapted the competencies and learning experiences to questionnaire format. Approximately 900 statements were obtained in response to the three questions asked in Round I. These statements were consolidated under the following three headings: knowledge competencies, skill competencies, and learning experiences. Many statements were mentioned more than once. These were synthesized into one statement. Some statements which included more than one idea were divided into two or more statements. The list of competencies and learning experiences was reduced to 90 items which represented those statements mentioned more than once by the Delphi panel. Thirty-six of the statements were knowledge competencies, 35 were skill competencies, and 19 were learning experiences. These 90 items under their respective headings made up the questionnaire for Round II.

Because the members of the Delphi panel were selected for their expertise in hospitality education, the researcher did not wish to automatically exclude competencies and learning experiences which were contributed by a solitary panel member in the Round I questionnaire. Therefore, the 22 unduplicated competencies and learning experiences were listed at the end of the Round II questionnaire and Delphi panel members were invited to write in one or more of these items which they felt should also be rated by the Delphi panel (Appendix D).

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## Round II

The Round II questionnaire was mailed to the 62 participants who accepted the invitation to participate in the study by responding to Round I. The Delphi panel members were asked to rate both the knowledge and skills competencies on a five-point Likert-type scale of importance. The levels of importance listed on the questionnaire were as follows:

- 5     essential
- 4     very important
- 3     important
- 2     not very important
- 1     not important at all

With regards to the list of learning experiences, the Delphi panel members were asked to rate each statement on a five-point Likert-type scale on appropriateness. The levels of appropriateness were:

- 5     very appropriate
- 4     quite appropriate
- 3     fairly appropriate
- 2     not very appropriate
- 1     not appropriate at all

The panel members were also asked to copy into the space provided on the questionnaire any competencies and learning experiences from the detached list at the end of the questionnaire which they felt warranted consideration and a rating from the Delphi panel. In order

to keep the questionnaire at a manageable length, the researcher did not number the extra statements which were to be considered by the Delphi panel. They had to copy onto the Round II questionnaire those statements that they felt strongly enough about to copy word for word. By asking them not to return the list, it was hoped that just checking off a number of the statements could be prevented (Appendix D).

The competencies and learning experiences that were copied onto the questionnaire seven or more times were included in the Round III questionnaire. Seven was arbitrarily chosen because it represented selection by over 10% of the panelists and would keep the Round III questionnaire at a reasonable length.

On August 7, 1989, a follow-up letter was mailed to those Delphi panel members who had not returned the Round II questionnaire (Appendix D). After receiving 56 (90 percent of the Round II questionnaires, the responses were analyzed in preparation for the Round III questionnaire.

### Round III

The Round III questionnaire consisted of the same competencies and learning experiences of Round II as well as two additional knowledge competencies and one additional learning experience. The 56 participants who responded to the Round II questionnaire were mailed the Round III questionnaire on August 25, 1989. For each statement, the Round III questionnaire contained the participant's



own Round II rating indicated in the column "Your previous rating" and the Round II modal rating was indicated in the column "Round II modal rating". For this questionnaire all participants were asked to consider their previous responses and the responses of the majority of the panel before rating each statement again in the column "Your new rating". Thus, participants were able to revise their previous responses if they so chose. If a participant's response to a particular statement was more than one classification away from the modal point, the participant was asked to state one or two concise reasons for deviating from the majority opinion. These reasons were to be written in the column entitled "Reason" (Appendix E).

Included in the Round III questionnaire were a number of demographic questions which were to be completed by panel members in order that the researcher might describe a profile of the Delphi panel (Appendix E). On September 15, 1989 a follow-up letter was mailed to all of those panel members who had not returned the Round III questionnaire (Appendix E).

#### Statistical Analysis

Although many of the earlier Delphi studies used the median in attempting to develop a consensus of opinion, most of these studies involved the forecasting of occurrence dates. The focus of this study was on the statement of opinions and the establishment of priorities. The researcher decided to use the mode as the most suitable measure of central tendency for reporting consensus in this

study. Because the mode does not lend itself to further statistical analysis (Rasp, 1972; Hinkle, Wiersma, & Jurs, 1979), the variance was used as the basis of the statistical analysis beyond the simple response comparisons. For a knowledge or skill competency to be classified as necessary, the statement had to be rated 4 "very important" or 5 "essential" by at least 80 percent of the panel on the Round III questionnaire. To identify the learning experiences as appropriate, each statement had to be rated 4 "quite appropriate" or 5 "very appropriate" by at least 80 percent of the members of the panel on the Round III questionnaire. Rossman and Bunning (1978) used the same methodology in studying educators in adult education.

The t-test for dependent or correlated data is used to test the relationship between matched pairs of data and was used to test for significant convergence or divergence of opinion from Round II to Round III. The formula provided by Hinkle et al., (1979) was used,  $DF = N - 2$ .

$$t = \frac{s_1^2 - s_2^2}{\sqrt{\frac{4s_1^2s_2^2}{n-2}(1 - r_{12}^2)}}$$

The t-test tested the null hypothesis that there was no significant difference between the variances of the respondents' answers to statements during the rounds of iterations. The level of significance was set at the .05 level. If it was found that the

difference between the variance for an item in Round II and that same item in Round III was statistically significant, then it would tend to indicate that convergence or divergence of opinion had occurred with regard to that specific statement.

The competencies and learning experiences identified by the panel were rank ordered on the basis of both the modal percentage and mean scores for each group (knowledge competencies, skill competencies, and learning experiences) based on the third round responses.

## CHAPTER IV

## FINDINGS OF THE STUDY

The purposes of this study were (1) to identify and gain consensus on knowledge and skill competencies needed by an effective hospitality educator, and to ascertain if groups converge; and (2) to identify and gain consensus on the identified learning experiences that will enable the acquisition of the identified knowledge and skill competencies.

To accomplish these purposes the researcher established the following objectives: (1) construct a panel of expert hospitality educators; (2) conduct a three-round Delphi study to identify the knowledge and skill competencies and appropriate learning experiences that are needed by an effective hospitality educator; (3) encourage convergence of opinion among the panel with regards to the identified competencies and learning experiences; and (4) rank order the competencies and learning experiences according to the modal and mean responses from the Round III questionnaire.

This chapter presents the findings obtained in meeting the purposes and objectives of the study. The findings are presented in the following order:

1. A profile of the Delphi panel
2. Response to the three-round Delphi exercise
3. Identification of competencies and learning experiences

4. Necessary competencies and appropriate learning experiences
5. Convergence of opinion
6. Rank order of the competencies and learning experiences.

#### A Profile of the Delphi Panel

The Delphi technique has traditionally employed experts as panel members (Dalkey, et al, 1972). The panel for this study consisted of hospitality educators who were nominated by their peers. Included in the Round III questionnaire was a separate page of demographic questions which panel members were asked to complete and return. The questions asked of the hospitality educators were closely matched to the nomination criteria discussed in Chapter III. Data provided by 56 of the 65 panelists is shown in Table 1.

Sixty-one percent of respondents indicated that the researcher had their permission to include their names in the Appendix of the study. Seventy percent of respondents had completed a doctoral degree, and 78 percent held the rank of Professor or Associate Professor. The hospitality educators had been working for periods ranging from 2 to 40 years, with an average service period of 12.5 years. They had been in their current positions for periods ranging from 1 to 17 years with an average service period of 6.2 years.

TABLE 1. Demographic data from expert panelists

Characteristic	Hospitality educator	
	no.	%
<b>Highest degree</b>		
Ph.D./J.D.	39	69.6
M.A./M.S./M.B.A.	17	30.4
<b>Academic rank</b>		
Professor	15	26.8
Associate Professor	29	51.7
Assistant Professor	10	17.9
Instructor	2	3.6
<b>Years in education</b>		
1 - 5	4	7.1
6 - 10	16	28.6
11 - 15	23	41.1
16 - 20	9	16.0
21 - 25	2	3.6
26 - 30	0	0
31 - 35	1	1.8
36 - 40	1	1.8
<b>Years in position</b>		
1 - 4	19	33.9
5 - 8	28	50.0
9 - 12	5	8.9
13 - 16	2	3.6
17 - 20	2	3.6

Forty-six (82 percent) hospitality educators indicated that they had served in an official position in a national or state

professional organization (e.g. CHRIE) one or more times. Thirty-two (57 percent) hospitality educators had been editorial board members of professional journals (e.g., CHRIE). Twenty-six (46 percent) hospitality educators had been awarded recognition for outstanding scholarship or teaching.

With regard to publishing research or other writing, 84 percent indicated that they published one or more articles per year and 80 percent indicated that they presented papers at conferences or seminars one or more times each year (Table 2).

TABLE 2. Frequency of publication and presentation of papers

Frequency	Educator	
	no.	%
<b>Publication</b>		
more than once each year	19	33.9
about once each year	28	50.0
between one and two years	6	10.7
more than once every two years	3	5.4
<b>Presentation</b>		
more than once each year	10	17.9
about once each year	35	62.5
between one and two years	9	16.0
more than once every two years	2	3.6

### Response to the Three-Round Delphi Exercise

The invitation to participate in the study and the Round I questionnaire were mailed to 100 nominated hospitality educators. The number of responses to each round was 62, 56, and 56 respectively. The questionnaire for each round was mailed only to those who had responded to the previous round.

### Identification of Competencies and Learning Experiences

The Round I questionnaire asked panel members to identify five knowledge competencies and five skills competencies needed by an effective hospitality educator. The panel members were also asked to identify five learning experiences that would be appropriate in reaching the competencies. Approximately 900 statements were submitted in response to the three questions asked in Round I. These statements were compiled under the headings of knowledge, skills, and learning experiences. The list of competencies and learning experiences was reduced to 90 items. An additional 22 items were added at the end of the Round II questionnaire.

Given below is one example from each of the three groups which shows how original statements made by panel members in Round I were compiled to form one statement which was used in the next two rounds of questionnaires. While the researcher and university faculty were compiling the statements into one item, the factor of objectivity was of paramount importance. Each statement was listed on a spreadsheet and systematically reviewed in terms of key words or phrases that



appeared to convey the panel members' motives or intent with regards to the specific content within each statement. When there was a doubt about the response to a statement, a telephone call was made to clear up the ambiguity and place the response in the appropriate generalized classification.

### Knowledge Competencies

Final item used in Rounds II and III: Comprehend changing trends in the hospitality industry.

Original statements submitted by panel members:

knowledge of current trends and future trends in the industry;  
 industry market trends;  
 trends in the hospitality industry;  
 knowledge of the industry and its trends;  
 awareness of trends in the industry;  
 awareness of industry trends in regards to market segmentation in both lodging and food service;  
 familiarity with current hospitality trends;  
 awareness of latest trends in the hospitality industry;  
 general knowledge of industry trends.

### Skill Competencies

Final item used in Rounds II and III: The use of microcomputers and software related to hospitality.

Original statements submitted by panel members:

skills in the use of microcomputers;  
 computer skills;  
 use computers;  
 computer literacy and skill in use of hospitality related software;  
 skill in use of computers as a management information tool;  
 ability to use computers;  
 skill in the use of microcomputer software related to hospitality education;  
 ability to use hotel/restaurant software;  
 computer literacy with word processing and spreadsheet software;  
 skill in all aspects of computer software related to hospitality education;

ability to use computers and computer software packages to develop research methodologies and student learning exercises.

### Learning Experiences

Final item used in Rounds II and III: Work in the industry.

Original statements submitted by panel members:

definitely industrial work experience;  
 working at a unit level in the industry;  
 work experience in hospitality industry;  
 industry experience;  
 hospitality industry work experience;  
 industrial or corporate work experience in the content area in which one teaches;  
 gain practical work experience within the hospitality industry;  
 manage a hotel or restaurant;  
 update experience by working in the industry;  
 spend a summer working on a hospitality site;  
 experience in a hospitality segment;  
 work experience at middle or upper management;  
 managerial or administrative experience in the industry;  
 working with hospitality personnel and their guests in the industry;  
 working in the industry in all types of positions;  
 get a job in the industry;  
 industry operations work experience;  
 meaningful industry experience at the managerial level.

### Necessary Competencies and Appropriate Learning Experiences

The panel members identified 36 knowledge competencies, 35 skill competencies, and 19 learning experiences which were mentioned at least twice and were used in the study. The panel identified an additional 22 items at least once but these were excluded from the study.

Necessary competencies were defined as those items rated 5 "essential" or 4 "very important" by at least 80 percent of the panel members on the Round III questionnaire. Appropriate learning

experiences were defined as those items which were rated 5 "very appropriate" or 4 "quite appropriate" by at least 80 percent of the panel members on the Round III questionnaire. The 27 statements (30 percent) meeting the established criteria are shown in Tables 3, 4, and 5.

TABLE 3. Knowledge competencies identified as necessary.

Statement <sup>a</sup>	Modal priority Round III	5 essential %	4 very important %
1. Comprehend changing trends in the hospitality industry	5	76.8	21.4
2. Discern current research in hospitality education and related fields	4	32.1	57.1
3. Understand trends in specific content area	5	58.9	35.7
4. Recognize how a specific course relates to the entire curriculum	5	67.9	23.2
5. Understand how the hospitality industry works	5	76.8	19.6
6. Comprehend research methodology and procedures	4	10.7	73.2

<sup>a</sup>Item numbers are listed as they appear on the two rounds of the questionnaire.

TABLE 3. (continued)

Statement <sup>a</sup>	Modal priority Round III	5 essential %	4 very important %
7. Recognize current hospitality needs	4	25.0	69.6
8. Understand the current needs and wants of the consumer	4	26.8	58.9
11. Recognize how public policy, current legislation and legal responsibilities affect the hospitality industry	4	23.2	64.3
13. Possess a high degree of knowledge in a specific content area	4	37.5	44.6
28. Know of career opportunities for students	4	35.7	46.4
29. Recognize student expectations	4	25.0	55.4
30. Recognize employer expectations	4	30.4	60.7
31. Understand the importance of continuous professional growth	4	44.6	46.4

TABLE 4. Skill experiences identified as necessary.

Statement <sup>a</sup>	Modal priority Round III	5 essential %	4 very important %
2. Communicate effectively via writing and speaking	5	64.3	26.8
3. Advise and counsel students	4	35.7	53.6
4. Plan and organize instruction	5	57.1	33.9
6. Recognize individual differences in students	4	19.6	64.3
8. Relate theory to practical application	5	51.8	33.9
9. Speak to a variety of audiences at their level	4	23.2	60.7
23. Promote higher level thinking and reasoning among students	4	23.2	60.7

<sup>a</sup>Item numbers are listed as they appear on the two rounds of the questionnaire.

TABLE 5. Learning experiences identified as appropriate.

Statement <sup>a</sup>	Modal priority Round III	5 very appropriate %	4 quite appropriate %
5. Publish articles, books, etc.	4	25.0	62.5
6. Participate in conferences, workshops, seminars	4	16.1	71.4
7. Intern under or observe knowledgeable teachers (e.g. Teaching Assistant)	4	14.3	66.1
8. Continue self-education	5	42.9	39.3
18. Read current professional publications	5	73.2	21.4
19. Interact with educational colleagues	5	62.5	30.4

<sup>a</sup>Item numbers are listed as they appear on the two rounds of the questionnaire.

### Convergence of Opinion

The aim of any Delphi study is to encourage convergence of opinion during successive rounds of questionnaires. In this study panel members were asked to rate competency and learning experience

statements in two successive questionnaires (Rounds II and III).

The variance (i.e., a measure of variability around the mean) was used to test for convergence of opinion between Round II and Round III. To determine convergence of opinion, the variance for each statement rated on the Round II questionnaire was compared with the variance for the same statement on Round III. A decrease in the variance between the rounds indicated a convergence of opinion while an increase in the variance indicated a divergence of opinion.

The t value, or the level of significance of the differences in the variances, was calculated for each item. The larger the t value, the less likely is the probability that the difference between the two variances could occur when the null hypothesis is true. The variances and t values are shown in Tables 6, 7, and 8.

Between Rounds II and III, the variances of 7 (19 percent) of the knowledge competencies, 5 (14 percent) of the skill competencies, and 1 (5 percent) of the learning experiences had a t value which was significantly different at the .05 level. A significant convergence of opinion was established on these 13 (14 percent) statements.

TABLE 6. Variance and t-value for each knowledge statement in Rounds II and III

Item number <sup>a</sup>	Variance		t value <sup>b</sup>
	Round II	Round III	
1.	.279	.227	1.1613
2.	.527	.390	1.8317
3.	.470	.362	1.6880
4.	.586	.428	1.9627
5.	.337	.272	1.4278
6.	.701	.461	2.2851*
7.	.356	.270	1.2100
8.	.582	.402	1.7725
9.	.749	.439	3.3413**
10.	.569	.425	1.5021
11.	.434	.352	1.3141
12.	.636	.566	0.6719
13.	.944	.586	2.6427**
14.	.571	.491	1.0687
15.	.625	.362	3.0157**
16.	.236	.286	- 1.0916
17.	.574	.348	2.4938**
18.	.690	.509	2.6585**
19.	.758	.586	1.3661
20.	.390	.374	0.2008
21.	.543	.579	- 0.3378
22.	.602	.416	1.9433
23.	.664	.654	0.0695
24.	.653	.579	0.7104
25.	.655	.615	0.3341
26.	.545	.433	1.2369
27.	.658	.418	2.3580*
28.	.743	.574	1.6701
29.	.508	.508	0.0000
30.	.425	.353	0.8855

<sup>a</sup>Item numbers are listed as they appeared on the two rounds of the questionnaire.

\*Significant at .05 level. \*\*Significant at .01 level.

<sup>b</sup>Degrees of Freedom range from 52-54.



TABLE 6. (continued)

Item number <sup>a</sup>	Variance		t value
	Round II	Round III	
31.	.535	.416	1.1962
32.	.509	.379	1.8332*
33.	.390	.409	- 0.3130
34.	.322	.270	0.8920
35.	.483	.470	0.2169
36.	.574	.436	1.2905

TABLE 7. Variance and t-value for each skill statement in Rounds II and III

Item number <sup>a</sup>	Variance		t value <sup>b</sup>
	Round II	Round III	
1.	.756	.683	0.6568
2.	.435	.433	0.0203
3.	.426	.409	0.1963
4.	.628	.436	1.6159
5.	.622	.475	1.6367
6.	.709	.563	1.5327
7.	.943	.634	2.3929*
8.	.425	.530	- 1.4722
9.	.452	.452	0.0000
10.	.891	.797	1.1724
11.	1.010	.835	1.2173
12.	.788	.577	2.0384*
13.	.766	.488	2.3804*
14.	1.200	1.000	1.2952
15.	.884	.831	0.2925
16.	1.095	1.000	0.4865
17.	.845	.597	1.8590
18.	.763	.649	0.7628
19.	.726	.581	1.5096
20.	.482	.535	- 0.7536
21.	.436	.233	2.7686*
22.	.670	.497	1.4050
23.	.672	.563	1.1574
24.	.613	.525	0.9880
25.	.679	.555	0.9682
26.	.840	.527	2.2448*
27.	.618	.511	1.1317
28.	.527	.527	0.0000
29.	.909	.861	0.2820
30.	.831	.643	1.3454
31.	.579	.653	- 0.8327

<sup>a</sup>Item numbers are listed as they appeared on the two rounds of the questionnaire.

\*Significant at .05 level.

<sup>b</sup>Degrees of Freedom range from 52-54.

TABLE 7. (continued)

Item number <sup>a</sup>	Variance		t value <sup>b</sup>
	Round II	Round III	
32.	.533	.488	0.5031
33.	.556	.543	0.1386
34.	.395	.400	- 0.0705
35.	.582	.577	0.0621

TABLE 8. Variance and t-value for each learning experience statement in Rounds II and III

Item number <sup>a</sup>	Variance		t value <sup>b</sup>
	Round II	Round III	
1.	.727	.701	0.2285
2.	.897	.768	0.8595
3.	.743	.646	0.7775
4.	.657	.519	1.2074
5.	.762	.577	1.9314
6.	.581	.436	1.4470
7.	.788	.634	1.1645
8.	.627	.618	0.0804
9.	.795	.727	0.5833
10.	.686	.582	0.8704
11.	.698	.416	2.3601*
12.	1.117	.891	1.4439
13.	.761	.768	- 0.0452
14.	.812	.790	0.1483
15.	.652	.618	0.4285
16.	.632	.615	0.1349
17.	.682	.600	0.5956
18.	.244	.331	- 1.5621
19.	.395	.397	- 0.2555

<sup>a</sup>Item numbers are listed as they appeared on the two rounds of the questionnaire.

\*Significant at .05 level.

<sup>b</sup>Degrees of Freedom range from 52-54.

The frequency of responses by classification for Rounds II and III for each statement are shown in Tables 9, 10, and 11. The frequencies presented indicate that after the modal priority classification was established in Round II, panel members converged in the majority of cases toward the initial Round II modal classification.

TABLE 9. Frequencies by classification for each knowledge statement on Rounds II and III

Item number <sup>a</sup>	Round II classification <sup>b</sup>					Round III classification <sup>b</sup>				
	5	4	3	2	1	5	4	3	2	1
1.	35	20	1	0	0	43	12	1	0	0
2.	15	27	14	0	0	18	32	6	0	0
3.	1	29	20	6	0	33	20	3	0	0
4.	1	34	12	9	0	38	13	5	0	0
5.	40	13	3	0	0	43	11	2	0	0
6.	5	33	14	2	2	6	41	7	1	1
7.	15	35	6	0	0	14	39	3	0	0
8.	16	24	16	0	0	15	33	8	0	0
9.	11	22	20	1	1	8	34	13	1	0

Note. N = 56.

<sup>a</sup>Item numbers are listed as they appear on the two rounds of the questionnaire.

<sup>b</sup>5 = essential, 4 = very important, 3 = important, 2 = not very important, 1 = not important at all.

TABLE 9. (continued)

Item number <sup>a</sup>	Round II classification <sup>b</sup>					Round III classification <sup>b</sup>				
	5	4	3	2	1	5	4	3	2	1
10.	5	28	20	1	1	8	35	12	1	0
11.	12	31	11	0	0	13	36	7	0	0
12.	4	13	35	2	2	3	20	29	3	1
13.	21	15	18	1	1	21	25	9	1	0
14.	0	20	31	2	3	1	19	31	4	1
15.	6	19	28	1	1	3	24	29	0	0
16.	0	7	43	6	0	0	10	40	6	0
17.	2	24	27	1	2	1	21	32	2	0
18.	8	17	29	1	1	3	24	27	1	1
19.	4	10	29	12	1	4	10	34	8	0
20.	2	15	36	3	0	1	20	32	3	0
21.	7	18	30	1	0	6	22	25	3	0
22.	7	23	25	0	1	5	26	21	0	0
23.	27	16	13	0	0	26	17	13	0	0
24.	6	19	26	5	0	5	19	28	4	0
25.	9	24	19	3	0	8	26	19	3	0
26.	6	18	30	2	0	3	21	30	2	0
27.	7	28	18	2	1	6	29	21	0	0
28.	16	32	4	3	1	20	26	9	1	0
29.	15	28	13	0	0	14	31	10	1	0

TABLE 9. (continued)

Item number <sup>a</sup>	Round II classification <sup>b</sup>					Round III classification <sup>b</sup>				
	5	4	3	2	1	5	4	3	2	1
30.	15	32	9	0	0	17	34	5	0	0
31.	25	22	9	0	0	25	26	5	0	0
32.	6	34	13	3	0	4	39	11	2	0
33.	3	36	15	2	0	5	33	17	1	0
34.	2	29	25	0	0	1	34	21	0	0
35.	7	23	26	0	0	7	25	24	0	0
36.	3	21	30	2	0	2	27	26	1	0

TABLE 10. Frequencies by classification for each skill statement on Rounds II and III

Item number <sup>a</sup>	Round II classification <sup>b</sup>					Round III classification <sup>b</sup>				
	5	4	3	2	1	5	4	3	2	1
1.	10	16	28	1	1	8	20	26	1	1
2.	31	20	5	0	0	36	15	5	0	0
3.	22	28	6	0	0	20	30	6	0	0
4.	27	23	5	0	1	32	19	5	0	0
5.	9	31	14	1	1	7	37	11	0	1
6.	15	28	11	1	1	11	36	7	1	1
7.	12	21	19	2	2	10	31	13	1	1
8.	27	24	5	0	0	29	19	8	0	0
9.	10	34	11	1	0	13	34	8	1	0
10.	11	26	13	5	1	8	30	12	5	1
11.	7	30	11	5	3	5	29	15	5	2
12.	5	20	25	4	2	2	26	23	4	1
13.	3	5	34	10	4	0	7	7	9	3
14.	4	10	17	19	6	3	9	18	22	4

Note. N = 56.

<sup>a</sup>Item numbers are listed as they appear on the two rounds of the questionnaire.

<sup>b</sup>5 = essential, 4 = very important, 3 = important, 2 = not very important, 1 = not important at all.

TABLE 10. (continued)

Item number <sup>a</sup>	Round II classification <sup>b</sup>					Round III classification <sup>b</sup>				
	5	4	3	2	1	5	4	3	2	1
15.	3	32	12	5	3	5	31	13	5	2
16.	5	17	21	9	4	3	16	19	15	3
17.	10	28	14	2	2	12	32	9	3	0
18.	11	14	27	3	0	10	13	32	1	0
19.	6	20	25	4	1	4	23	24	5	0
20.	7	29	19	1	0	9	27	19	1	0
21.	5	35	14	2	0	2	41	13	0	0
22.	10	28	16	1	1	10	31	14	1	0
23.	16	27	12	0	1	13	33	9	0	1
24.	3	32	16	4	1	4	31	19	1	1
25.	4	20	28	2	2	2	17	31	5	1
26.	2	20	23	8	3	2	18	29	7	0
27.	8	31	13	4	0	9	33	12	2	0
28.	14	27	15	0	0	14	30	11	1	0
29.	14	20	18	3	1	16	22	15	2	1
30.	6	27	19	1	3	5	28	21	0	2
31.	5	18	31	1	1	7	19	28	1	1
32.	10	24	21	0	0	10	28	18	0	0
33.	9	19	28	0	0	8	15	33	0	0



TABLE 10. (continued)

Item number <sup>a</sup>	Round II classification					Round III classification				
	5	4	3	2	1	5	4	3	2	1
34.	3	19	33	1	0	3	23	29	1	0
35.	7	16	31	2	0	8	17	30	1	0

TABLE 11. Frequencies of by classification for each learning experience statement on Rounds II and III

Item number <sup>a</sup>	Round II classification <sup>b</sup>					Round III classification <sup>b</sup>				
	5	4	3	2	1	5	4	3	2	1
1.	28	13	15	0	0	22	17	17	0	0
2.	10	20	22	2	2	11	19	24	1	1
3.	14	22	19	0	1	11	27	17	0	1
4.	11	30	13	1	1	9	35	11	0	1
5.	17	28	8	2	1	14	35	5	1	1
6.	13	35	6	1	1	9	40	6	0	1
7.	12	32	7	4	1	8	37	7	3	1
8.	25	21	9	1	0	24	22	9	1	0
9.	9	20	21	6	0	7	19	24	6	0
10.	14	27	12	3	0	14	30	10	2	0
11.	18	20	15	1	0	8	32	16	0	0
12.	14	24	14	0	4	11	25	16	2	2
13.	8	20	24	3	1	10	22	21	2	1

Note. N = 56.

<sup>a</sup>Item numbers are listed as they appear on the two rounds of the questionnaire.

<sup>b</sup>5 = very appropriate, 4 = quite appropriate, 3 = fairly appropriate, 2 = not very appropriate, 1 = not appropriate at all.

TABLE 11. (continued)

Item number <sup>a</sup>	Round II classification <sup>b</sup>					Round III classification <sup>b</sup>				
	5	4	3	2	1	5	4	3	2	1
14.	7	25	16	5	1	10	25	17	3	1
15.	5	20	27	3	1	5	23	25	2	1
16.	9	21	23	2	0	9	23	22	2	0
17.	17	18	20	0	0	17	23	16	0	0
18.	41	14	1	0	0	41	12	3	0	0
19.	36	16	4	0	0	35	17	4	0	0

#### Rank Order of Competencies and Learning Experiences

One objective of this study was to rank order the competencies (knowledge and skill) and learning experiences. Panel members identified the competencies and learning experiences in Round I and rated a compilation of those statements in Rounds II and III. Round III represented the converged opinion of the panel of "experts". The rank ordering was based on the final Round III responses. The competencies and learning experiences were rank ordered according to the modal percentage under the classification 5 "essential" for the competencies and 5 "very appropriate" for the learning experiences.

The rank ordering of the competencies and learning experiences based on this modal percentage appear in Tables 12, 13, and 14. The competencies and learning experiences were also rank ordered according to the mean ratings received under the three headings: knowledge, skill, and learning experiences. These appear in Tables 15, 16, and 17.

TABLE 12. Rank order of the knowledge competencies based on classification from Round III responses

Rank order	Item number <sup>a</sup>	Round III classification <sup>b</sup>		
		5 %	4 %	Total %
1.	1. Comprehend changing trends in the hospitality industry	76.8	21.4	98.2
2.	5. Understand how the hospitality industry works	76.8	19.6	96.4
3.	3. Understand trends in specific content area	58.9	35.7	94.6
3.	7. Recognize current hospitality needs	25.0	69.6	94.6
5.	4. Recognize how a specific course relates to the entire curriculum	67.9	23.2	91.1

Note. N = 56.

<sup>a</sup>Item numbers are listed as they appear on the Round III questionnaire.

<sup>b</sup>5 = essential, 4 = very important.

TABLE 12 (continued)

Rank order	Item number <sup>a</sup>		Round III classification <sup>b</sup>		
			5 %	4 %	Total %
5.	30.	Recognize employer expectations	30.4	60.7	91.1
7.	31.	Understand the importance of continuous professional growth	44.6	46.4	91.0
8.	2.	Discern current research in hospitality education and related fields	32.1	57.1	89.2
9.	11.	Recognize how public policy, current legislation and legal responsibilities affect the hospitality industry	23.2	64.3	87.5
10.	8.	Understand the current needs and wants of the consumer	26.8	58.9	85.7
11.	6.	Comprehend research methodology and procedures	10.7	73.2	83.9
12.	13.	Possess a high degree of knowledge in a specific content area	37.5	44.6	82.1
12.	28.	Know of career opportunities for students	35.7	46.4	82.1
14.	29.	Recognize student expectations	25.0	55.4	80.4

TABLE 13. Rank order of the skill competencies based on classification from Round III responses

Rank order	Item number <sup>a</sup>	Round III classification <sup>b</sup>		
		5 %	4 %	Total %
1.	2. Communicate effectively via writing and speaking	64.3	26.8	91.1
2.	4. Plan and organize instruction	57.1	33.9	91.0
3.	3. Advise and counsel students	35.7	53.6	89.3
4.	8. Relate theory to practical application	51.8	33.9	85.7
5.	6. Recognize individual differences in students	19.6	64.3	83.9
5.	9. Speak to a variety of audiences at their level	23.2	60.7	83.9
7.	23. Promote higher level thinking and reasoning among students	23.2	58.9	82.1

Note. N = 56.

<sup>a</sup>Item numbers are listed as they appear on the Round III questionnaire.

<sup>b</sup>5 = essential, 4 = very important.

TABLE 14. Rank order of the learning experiences based on classification from Round III responses

Rank order	Item number <sup>a</sup>	Round III classification <sup>b</sup>		
		5 %	4 %	Total %
1.	18. Read current professional publications	73.2	21.4	94.6
2.	19. Interact with educational colleagues	62.5	30.4	92.9
3.	5. Publish articles, books, etc.	25.0	62.5	87.5
3.	6. Participate in conferences, workshops, seminars, etc.	16.1	71.4	87.5
5.	8. Continue self-education	42.9	39.3	82.2
6.	7. Intern under or observe knowledgeable teachers (e.g., Teaching Assistant)	14.3	66.1	80.4

Note. N = 56.

<sup>a</sup>Item numbers are listed as they appear on the Round III questionnaire.

<sup>b</sup>5 = very appropriate, 4 = quite appropriate.

TABLE 15. Rank order of the knowledge competencies based on mean scores from Round III responses

Rank order	Item number <sup>a</sup>	Round III mean score
1.	5. Understand how the hospitality industry works	4.732
2.	4. Recognize how a specific course relates to the entire curriculum	4.589
3.	31. Understand the importance of continuous professional growth	4.537
4.	3. Understand trends in specific content area	4.536
5.	1. Comprehend changing trends in the hospitality industry	4.214
5.	2. Discern current research in hospitality education and related fields	4.214
5.	30. Recognize employer expectations	4.214
8.	7. Recognize current hospitality needs	4.196
9.	13. Possess a high degree of knowledge in a specific content area	4.179
10.	28. Know of career opportunities for students	4.161

Note N = 56.

<sup>a</sup>Item numbers are listed as they appear on the Round III questionnaire.



TABLE 15 (continued)

Rank order	Item number <sup>a</sup>		Round III mean score
11.	8.	Understand the needs and wants of the consumer	4.125
12.	11.	Recognize how public policy, current legislation and legal responsibilities affect the hospitality industry	4.107
13.	29.	Recognize student expectations	4.036
14.	6.	Comprehend research methodology and procedures	3.893

TABLE 16. Rank order of the skill competencies based on mean scores from Round III responses

Rank order	Item number <sup>a</sup>	Round III mean score
1.	2. Communicate effectively via writing and speaking	4.554
2.	4. Plan and organize instruction	4.482
3.	8. Relate theory to practical application	4.375
4.	9. Speak to a variety of audiences at their level	4.054
5.	23. Promote higher level thinking and reasoning among students	4.018
6.	6. Recognize individual differences in students	3.982

Note. N = 56.

<sup>a</sup>Item numbers are listed as they appear on the Round III questionnaire.

TABLE 17. Rank order of the learning experiences based on mean scores from Round III responses

Rank order	Item number <sup>a</sup>	Round III mean score
1.	18. Read current professional publications	4.679
2.	19. Interact with educational colleagues	4.554
3.	5. Publish articles, books, etc.	4.071
4.	6. Participate in conferences, workshops, seminars, etc.	4.000
5.	8. Continue self-education	3.911
6.	7. Intern under or observe knowledgeable teachers (e.g., Teaching Assistant)	3.857

<sup>a</sup>Item numbers are listed as they appear on the Round III questionnaire.

N = 56.

## CHAPTER V

## SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Teacher competencies have become a major, if indirect basis for determining the effectiveness of teacher education programs. The movement towards greater accountability within the hospitality profession, as within other areas of education, demand the clear delineation and clarification of competencies or criteria of teacher effectiveness that will enable educators to teach successfully, to revise the subject matter and content of hospitality graduate programs, and to provide objective guidelines for evaluation. They can serve as a vehicle for identifying those knowledge and skill competencies and learning experiences which are essential to the professional development of the hospitality educator. These knowledge and skill competencies and learning experiences must be dynamic rather than remain static. They will need to be modified and adjusted to reflect societal, industry, learner, and subject-matter needs.

## Purposes

The purposes of this study were (1) to identify and gain consensus on knowledge and skill competencies needed by an effective hospitality educator and to ascertain if groups converge; and (2) to

identify and gain consensus on the identified learning experiences that will enable the acquisition of the identified knowledge and skill competencies.

#### Method

Both purposes were achieved by administering three successive Delphi questionnaires to a panel of experts consisting of 100 hospitality educators. In order to identify hospitality educator experts, a national survey was conducted of a random sample of 100 hospitality educators asking them to nominate five outstanding hospitality educators according to six criteria. The 100 hospitality educators nominated most frequently were chosen to participate in the Delphi study.

According to Pfeiffer (1968), the Delphi method provides for an impersonal, anonymous setting in which opinions can be voiced without bringing the experts together in any kind of face-to-face confrontation. An attempt is made to bring about convergence of opinion (consensus) through a series of questionnaire iterations. Through the series of mailed questionnaires, panel members are able to reconsider their earlier opinions and responses based upon reflective reasoning rather than through the pressures of group dynamics. Successive rounds of questionnaires and opinion feedback are used to produce carefully considered opinions.

The first questionnaire (Round I) was the least structured and contained three questions. Panelists were asked to identify needed

knowledge and skill competencies and appropriate learning experiences to gain the identified competencies. Upon return of the Round I questionnaires, the responses of the panelists were consolidated into three lists: knowledge competencies, skill competencies, and learning experiences. These lists became the questionnaire used in the second round (Round II) of the Delphi study.

In Round II, respondents received the consolidated lists and were asked to rate each knowledge and skill statement on a five-point Likert-type scale of appropriateness. After an analysis of these questionnaires, the researcher prepared a statistical report of the modal and mean responses for each of the statements in the study.

In Round III, each respondent received the questionnaire with the modal response and his/her own previous rating for each statement. Again the respondents were asked to rate each statement. If the respondent's new rating was more than one classification on either side of the Delphi groups' modal rating, the respondent was asked to state why they differed with the plurality of the groups' ratings. Upon receipt of these completed questionnaires, the researcher prepared a similar statistical analysis for each statement in the study as well as a consolidation of respondents' reasons for ratings which were more than one classification on either side of the modal rating. The final Round III responses represented the converged opinions of the Delphi panel members.

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### Findings

Of the 100 hospitality educators invited to participate in the Delphi study, 62 (62 percent) accepted the invitation. Of these 62 Delphi panel members, 56 (90 percent) completed and returned the Round II and Round III questionnaires. On the Round I and Round II questionnaires, panel members identified 36 knowledge competencies, 35 skill competencies, and 19 learning experiences. From these 90 statements, 27 statements (14 knowledge, 7 skill, and 6 learning experience) were identified after Round III as being necessary for an effective hospitality educator with regard to the established criteria selected.

In order to establish whether convergence of opinion had taken place between Rounds II and III, the variance of each statement was analyzed. Convergence of opinion was established on 32 of the 36 knowledge competencies, on 29 of the 35 skill competencies, and on 16 of the 19 learning experiences. As shown in Tables 6, 7, and 8, significant changes in convergence were found to exist among 7 knowledge competencies (19 percent), 5 skill competencies (14 percent, and 1 learning experiences (5 percent). Based on Round III responses, the statements were also rank-ordered under the three headings: knowledge competencies, skill competencies, and learning experiences.

### Discussion and Conclusions

This study was based on a modified Delphi technique as distinct from the traditional Delphi technique. A modified Delphi technique may omit Round I and/or Round IV and thus consist of only two or three rounds. Panel members for a modified Delphi technique may be selected according to widely varying criteria. In this study, the fourth round of questionnaire iteration was omitted, and panel members were identified as "experts" within the profession by their peers. The Round I questionnaire was included so that participants might express their own attitudes and opinions about their area of expertise, and also might have the opportunity to make a more direct contribution to the study. In effect, the Delphi panel members were asked to identify the statements and later rate these statements of knowledge and skill competencies and learning experiences. Two problems with such a procedure are the number and variety of responses submitted and the task of compiling these statements to represent objectively and accurately the opinions of the Delphi panelists.

The use of the Delphi technique was successful in generating a list of diverse competencies necessary for an effective hospitality educator and list of learning experiences that would be appropriate for acquiring the identified competencies. There was also a high degree of consensus on the knowledge and skill competencies and learning experiences indicating that the Delphi panelists did discriminate among the statements listed on the questionnaires.



The study also demonstrated the usability and value of the Delphi technique in an area that is difficult to study due to problems of definition and generalizability. The Delphi technique worked because of the excellent and consistent response rate over the three rounds of questionnaires. The response rate indicated a high level of interest and acceptance of the purposes of the study and the technique used. A high response rate was necessary to provide matched pairs of data.

Not only was a high degree of consensus achieved on most statements, but for many of the statements where a difference existed, a convergence of opinion occurred. The reasons why panel members' attitudes or opinions changed or whether they changed at all will remain unknown. Feedback of the reasons adduced by others may have stimulated some panel members to take into account rationales they had not previously considered and on that basis to change their numerical ratings on some statements.

Researchers have attempted to compare the Delphi technique with other procedures for collecting judgments and opinions. Campbell (1966) and Dalkey (1969b) indicated that the Delphi technique was more accurate in guessing, versus just playing an "educated hunch or seat of the pants" forecasting, the true position after controlled feedback iteration. However, Cyphert and Gant (1971) inserted a bogus item in their Delphi study which was initially rated low but when the feedback was distorted to yield a high rating, panel members rated the same item considerably above the average. Cyphert and Gant

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concluded that the Delphi technique could be used to mold opinion. In the present study, the researcher concluded that convergence of opinion to the consensus numerical ratings did accurately represent the attitudes and opinions of this Delphi panel. Still, the high consensus percentages must be viewed and interpreted with caution.

Perhaps the most problematic step in this study was the construction of the Round II questionnaire. The Round II questionnaire was a compilation of the knowledge and skill competencies and learning experiences that were submitted in the Round I questionnaire. The problem arose in part from the lack of research concerning the content analysis of original input. There is a growing body of research data on the use of prepared statements in round one (Uhl 1971); however, there is very little material available on allowing panel members to create their own statements to which to respond in round two. Judd (1972) indicated that one of the little understood areas of Delphi practice is the editing or content analysis phase of treating responses from panel members in round one. Cyphert and Gant (1970) and Rasp (1972) utilized a panel to construct the round two questionnaires from statements submitted in round one of their Delphi studies. In both of these studies the researchers expressed concern about the amount of distortion between the round two statements and the meaning or intent of the authors of the original statement in round one. This researcher expresses a similar concern for this study. The 896 statements submitted in the Round I questionnaire were reduced to 90 statements by the Round III

questionnaire. This researcher's concern about the possibility of having misrepresented panelists' opinions is expressed by Rasp (1972):

"The construction of Questionnaire 2 was perhaps the most crucial element in the success of the survey, and the uneasiness came in having no way to objectively determine its reliability" (p. 82)

When Delphi panelists were contacted for points of clarification on their responses, the statements seemed to become more general in their meanings. Many of the initial responses were actually more than one response or overlapped into the other two categories.

Judd (1972) reported on the content analysis phase of a Delphi study undertaken by Huckfeldt and Judd (1974). Their original statements in Round I totaled 1400, which were finally edited to 118 statements by a team consisting of four doctoral students and a professor whose area of expertise was content analysis. The task was completed over a 5-day period. In the current study this was completed by the researcher and three faculty whose areas of expertise was content analysis.

This researcher felt that there was adequate congruence of meaning in the statements that were constructed for Round I of this study. No complaints were received from the Delphi panel members about distortion of original statements.

Another problem aspect of this study was the use of prompts as examples in the Round I questionnaire. It was decided to give the Delphi panel member prompts because it was felt they might have some difficulty in answering the questions without giving the statements a

great deal of prior thought. Ware (1977) suggested that some means of helping Delphi participants suggest competency statements was necessary. In this study, two prompts were given at the end of each question. The researcher was concerned that Delphi panel members might simply respond by repeating the prompts. While it has been concluded that prompting participants may in fact influence their responses to the Round I questionnaire, successive questionnaire iterations gave panelists the opportunity to repeatedly evaluate and therefore discriminate among those statements which may have been initially suggested by the use of prompts.

After studying the list of rank-ordered competencies, it was found that competencies related to the hospitality industry and educative process were ranked among the highest in knowledge (1, 2, 3, 4, 5, 6, 7, 8, 11, 13, 28, 29, 30, and 31 respectively, Table 12). As shown in Table 13, skill competencies rated the highest were 2, 3, 4, 6, 8, 9, and 23 respectively. The learning experiences identified as appropriate for acquiring the knowledge and skill competencies include 5, 6, 7, 8, 18, and 19 respectively, see Table 14). Like the competencies, the learning experiences identified as appropriate for acquiring the knowledge and skill competencies appear to be somewhat random in nature. Perhaps this is because panel members were instructed that it was not necessary to match the learning experiences to specific competencies. The learning experiences considered most appropriate for acquiring the competencies appear to be those activities or experiences which

require involvement with education or other professionals within the hospitality industry. For example, reading current professional publications, interacting with other colleagues in education, publication, participation in conferences, workshops, seminars were ranked 1, 2, 3, and 4, respectively (Table 14).

#### Recommendations

The lists of knowledge and skill competencies and learning experiences identified in this study represent the personal philosophies of the expert Delphi panel members. Thus they reflect some of the knowledge and skills necessary for an effective hospitality educator and some of the learning experiences that would be appropriate in gaining the identified competencies. The results of this study could be used by hospitality educators and the hospitality industry in several ways:

(1) Research that identifies competency statements for a particular segment of educators, tend to group the competencies in clusters (Lynch, 1974) or classifications (Brown, 1980). The statements in this study are almost unclassifiable. Hospitality educators will be able to look at each competency as an individual concept or idea rather than as a subset within a schema of classification. Hospitality educators may select those knowledges and skills in which they feel improvement is needed and place effort on those unique items rather than on an entire classification of competencies. Specific learning experiences can then be chosen that

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will help to acquire those desired competencies.

While the competencies identified as necessary represent very broad capabilities that are attainable by hospitality educators, it would be unrealistic to imply that all hospitality educators need to possess all of the competencies. Responsibilities and relative competencies for hospitality educators will be defined by the expectation of the institution where they are employed along with professional considerations.

(2) The competencies could be used in revising hospitality curricula in graduate education programs. High-ranking knowledge and skill competencies could be implemented which required learners to think about implementing critical thinking and reasoning in the decision making process. High-ranking learning experiences might also be incorporated into the required curriculum (e.g., reviewing current research in hospitality and writing for publication and/or presentation at conferences and workshops) and others might be required as extra-curricular activities (e.g., participation in professional organizations and attendance at conferences).

(3) The results of the study could be used as a basis for developing an evaluation instrument for future hospitality educators. In such an instrument, the competencies could be written in behavioral terms, appropriate criteria could be developed, and assessment measures designed. In programs where many courses are available from which students pick and choose, advisors of students, particularly entering graduate students, can administer the

evaluation instrument to test the degree of competency attainment and prescribe courses that will strengthen the student in areas where there is a perceived weakness. Similarly this evaluation instrument could be used by advisors and concerned others to check on a student's current knowledge and skills.

#### Recommendations for Further Research

Because the competencies and learning experiences appear to have been randomly selected by the Delphi panel and because there are many other competencies and learning experiences of equal value or appropriateness, it is felt that there is little value in the replication of this study. However, it is believed that further research is needed in order to validate those knowledge and skill competencies and learning experiences already identified in this study. This research could be accomplished by using different population groups such as graduate students in hospitality programs or members in professional organizations. It is hoped that those knowledge and skill competencies and learning experiences deemed important by all concerned publics in hospitality education will be addressed. In order for hospitality education programs to be successful and make an impact they must turn out a successful educator who is comfortable and adept in the role of dealing with the institution, industry, and students. Further research considerations could be asking participants to match the identified learning experiences with the identified knowledge and skill competencies, or

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asking the participants to identify new learning experiences matched to the identified competencies. This research would have the effect of delineating those experiences which may lead to the acquisition of the identified competencies and thus bolster hospitality programs and the industry.

#### Methodological Concerns and Recommendations

Many questions arose during this study. Of greatest concern to this researcher was how responses from the first round of the Delphi process should be compiled to represent most objectively and accurately the attitudes and opinions of the panel members. The researcher's task is to construct the round two questionnaire to reflect original input in order that the Delphi participants feel that they are making contributions which are of value to the study. Additionally, there must be sufficient items to keep distortions or omissions to a minimum.

Although the researcher feels that the methodology used to select the experts for this study was appropriate, these methods should be refined. Criteria should be established for determining appropriate experts as participants in a Delphi study along with the number and possible types of experts being employed. These individuals should be experts in the area of curriculum development, subject-matter content, and versed in hospitality programs and the industry. It is not necessary that they be experts in the Delphi method. Another concern of the researcher was the timeframe used in the study. Two

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follow-up letters were mailed to increase the response rate for the nomination stage of the study and for the initial Round I questionnaire. The end of Spring term and Summer months were not optimal times for mailing questionnaires and receiving responses. Faculty were difficult to reach initially and commit to in terms of the longevity associated with a Delphi study.

A final area of concern is the low explanatory power of the Delphi technique itself. Although this study and other studies have shown that a convergence of opinion and consensus does occur, little is known about the actual process of how and why it occurs.

This study was undertaken in order to elicit the knowledge and skill competencies and appropriate learning experiences necessary for a hospitality educator. The intention of this study is to provide the "groundwork" for future studies in more detailed and specific areas dealing with hospitality education. Curricula decisions could be formulated and addressed with regard to the knowledge, skill, and learning experiences offered the educator; to insure that a strategic fit between the objectives and goals of the learner, subject-matter content, industry, and institution are taking place with a minimum level of dysfunction. It is hoped this study provides a theoretical basis whereby future studies may find insight into those issues of that hospitality educators have deemed to be important in hospitality education. This study is one of the first to look at those knowledge and skill competencies and learning experiences from the viewpoint of the educators themselves, and the first to do it using the Delphi

method. This study should lead to positive events because it used hospitality experts, who are in education, in an attempt to focus in and narrow down the many different views which prevail in hospitality education. It is that the results of this study will lead to a singular synergistic effort on behalf of all concerned parties, to produce a consistent product across all of the hospitality curricula to each hospitality student without regards to where that student may find themselves matriculated.

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APPENDIX A

PILOT TEST

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Iowa State University of Science and Technology Ames, Iowa 50011-1120



Department of Hotel, Restaurant,  
and Institution Management  
11 MacKay Hall  
Telephone 515-294-1730

March 10, 1989

Dear Hospitality Educator:

I am a doctoral student majoring jointly in hotel, restaurant, and institution management and home economics education at Iowa State University, and I am writing to ask for your help with my dissertation research.

The study will identify the competencies necessary for an effective hospitality educator, and the learning experiences that would be most appropriate for acquiring the competencies. We believe that the findings from this study will be useful to individuals planning careers in hospitality education and will be useful to academic programs as they make hospitality curriculum determinations.

You, as a hospitality educator, have been chosen by random selection as one of twenty hospitality educators to whom a questionnaire is being sent. Your input is greatly needed.

Your reply will be confidential as the questionnaire is coded (top right corner) for use in accounting for the return of all questionnaires.

Please complete and return the questionnaire in the stamped addressed envelope that is provided for your convenience in responding. Please return the questionnaire by March 24, 1989. If you have any questions or concerns, I would be happy to hear from you. Please call me collect at (515) 232-0103.

Thank you very much for your time and assistance. Final results of the study will be furnished upon request.

Sincerely,

John T. Canterino, M.S.  
Principal Investigator

Jerelyn Schultz, PhD  
Major Professor  
Family and Consumer Sciences Education

Thomas Walsh, PhD  
Major Professor  
Hotel, Restaurant, and Institution Management

Code No.

## QUESTIONNAIRE

In this questionnaire you are asked to list competencies, that is, knowledge and skills needed by an effective hospitality educator. You are also asked to list learning experiences which would be appropriate for acquiring the competencies. Please be brief in your responses.

1. List five (5) knowledge competencies you consider especially needed by an effective hospitality educator. Knowledge is defined here as the things one needs to know, be aware of, but for this study does not include knowledge of content material such as purchasing, the relationship between equipment specifications and restaurant design, etc.

Examples: Familiarity with current research in hospitality education.  
Awareness of the impact of social change on hospitality education.

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2. List five (5) skill competencies you consider especially needed by an effective hospitality educator. Skills are defined here as the things one needs to be able to do, perform, or be proficient in.

Examples: Skill in the use of microcomputer software related to hospitality education.  
Ability to diagnose education needs of hospitality students.

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3. List five (5) learning experiences you consider appropriate for obtaining or acquiring the necessary competencies. You need not necessarily correlate the learning experiences with your responses to question 1 and question 2.

Examples: Conducting empirical research.  
Industrial or corporate work experience.

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Return to: John T. Canterino  
Iowa State University  
Department of Hotel, Restaurant, and Institution Management  
11 MacKay Hall  
Ames, IA 50011

Iowa State University of Science and Technology



Ames, Iowa 50011-1120

Department of Hotel, Restaurant,  
and Institution Management  
11 MacKay Hall  
Telephone 515-294-1730

March 30, 1989

Dear Hospitality Educator:

On March 10, 1989 I mailed you a questionnaire asking you to list some knowledge and skill competencies needed by an effective hospitality educator, and appropriate learning experiences for acquiring the competencies. As yet I have not received your response.

I realize that this is a busy time of the year due to exams and spring break. However, I would appreciate you taking a few minutes to fill out and return my questionnaire. I need your input to promote the validity of my study; and I believe that my study will be of value to the hospitality industry.

I have enclosed another questionnaire and a stamped addressed envelope for your convenience in responding. If you have any questions or concerns call me collect (515) 232-0103. If you have already returned the questionnaire, please disregard this reminder. Thank you for your time and interest.

Sincerely,

A handwritten signature in cursive script that reads "John Canterino".

John Canterino, M.S.  
Principal Investigator

**APPENDIX B**

**NOMINATION PROCESS**



Please list the names and addresses of outstanding hospitality educators whom you would recommend be contacted for the purpose of this study.

Hospitality Educators

	<u>Name</u>	<u>Address</u>
1.	_____	_____ _____ _____
2.	_____	_____ _____ _____
3.	_____	_____ _____ _____
4.	_____	_____ _____ _____
5.	_____	_____ _____ _____

APPENDIX C

ROUND I

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Code No.

☐ Yes, I would like to participate in the Delphi study.  
(Please continue by answering the three questions below.)

☐ No, I do not care to participate in the Delphi study.  
(Please return your questionnaire so that I may remove  
your name from my mailing list.)

### QUESTIONNAIRE

In this questionnaire you are asked to list competencies, that is, knowledge and skills needed by an effective hospitality educator. You are also asked to list learning experiences which would be appropriate for acquiring the competencies. Please be brief in your responses.

1. List five (5) knowledge competencies you consider especially needed by an effective hospitality educator. Knowledge is defined here as the things one needs to know, be aware of, but for this study does not include knowledge of content material such as purchasing, the relationship between equipment specifications and restaurant design, etc.

Examples: Familiarity with current research in hospitality education.  
Awareness of the impact of social change on hospitality education.

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2. List five (5) skill competencies you consider especially needed by an effective hospitality educator. Skills are defined here as the things one needs to be able to do, perform, or be proficient in.

Examples: Skill in the use of microcomputer software related to hospitality education.  
Ability to diagnose education needs of hospitality students.

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3. List five (5) learning experiences you consider appropriate for obtaining or acquiring the necessary competencies. You need not necessarily correlate the learning experiences with your responses to question 1 and question 2.

Examples: Conducting empirical research.  
Industrial or corporate work experience.

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Return to: John T. Canterino  
Iowa State University  
Department of Hotel, Restaurant, and Institution Management  
11 MacKay Hall  
Ames, IA 50011

Iowa State University *of Science and Technology*



Ames, Iowa 50011-1120

Department of Hotel, Restaurant,  
and Institution Management  
11 MacKay Hall  
Telephone 515-294-1730

May 1, 1989

Dear Hospitality Educator:

Thank you for taking the time and effort to participate in my doctoral research study at Iowa State University. Since the academic year is coming to a close, and some faculty members may not be teaching during the summer session, kindly check the appropriate box where you would prefer to have the remaining questionnaires sent from June 1-August 15. Once again, thank you for your help with the study.

☐ Please mail the remaining questionnaires to the same address as Questionnaire #1.

☐ Please DO NOT mail the remaining questionnaires to the same address as Questionnaire #1. Instead please mail them to the following address:

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Sincerely,

*John Canterino*  
John Canterino, M.S.  
Principal Investigator

Iowa State University *of Science and Technology*



Ames, Iowa 50011-1120

Department of Hotel, Restaurant,  
and Institution Management  
11 MacKay Hall  
Telephone 515-294-1730

May 25, 1989

Dear Hospitality Educator:

On May 1, 1989 I mailed you a questionnaire asking you to identify competencies, skills, and learning experiences needed by a hospitality educator. As of yet I have not received your response.

The response to my questionnaire has been encouraging. However, I need your input to promote the validity of my study; and I believe that my study will be of value to the hospitality industry.

I have enclosed another questionnaire and a stamped addressed envelope for your convenience in responding. Please return the enclosed questionnaire by June 5, 1989. If you have already returned the questionnaire, please disregard this reminder. If you have any questions or concerns call me collect (515) 232-0103. Again thank you for your time and interest.

Sincerely,

John Canterino, M.S.  
Principal Investigator

APPENDIX D

ROUND II

Iowa State University *of Science and Technology*



Ames, Iowa 50011-1120

Department of Hotel, Restaurant,  
and Institution Management  
11 MacKay Hall  
Telephone 515-294-1730

July 20, 1989

Dear Hospitality Educator:

Thank you for accepting my invitation and completing the first questionnaire (Round I) of my Delphi study. The response rate was encouraging and I am pleased with the list of competencies which I have compiled from your responses.

Round II (enclosed) is a compilation of responses from Round I. The list of competencies and learning experiences has been reduced to 90 items. These 90 items represent those statements mentioned more than once by the Delphi panel. I have rewritten a number of statements in order to meet space limitations and to ensure that each competency and learning experience to be rated by the Delphi panel is discrete and unambiguous; for example, where two or more competencies were mentioned in only one statement, I have split the statement into two competencies.

In Round II I am asking you to rate each of the competencies on a five-point scale of "importance." As you rate each competency, please consider its importance to the effectiveness of a hospitality educator in preparing future educators. I am asking you to rate the learning experiences on a five-point scale of "appropriateness." As you rate each learning experience, please consider its appropriateness for acquiring the competencies.

Because members of the Delphi panel were selected for their expertise in hospitality education, I did not wish to automatically exclude competencies and learning experiences which were contributed by only one panel member in Round I. Therefore I have listed these unduplicated responses at the end of the questionnaire and have provided space at the end of the questionnaire so that you may write in one or more of these items if you feel they should be added to the list to be rated by the Delphi panel.

As time is an important factor in scheduling future mailings, please respond with your questionnaire by July 31, 1989. A stamped addressed envelope is included for your convenience. Thank you for your time and interest

Sincerely,

John Canterino M.S.  
Principal Investigator



## QUESTIONNAIRE II

For the following knowledge and skill competencies which have been identified by the Delphi panel, please circle a number from 1 - 5 to indicate how important you consider each for an effective hospitality educator.

	essential	very important	important	not very important	not important at all
<b>Knowledge Competencies:</b>					
1. Comprehend changing trends in the hospitality industry.	3	4	3	2	1
2. Discern current research in hospitality education and related fields.	3	4	3	2	1
3. Understand trends in specific content area.	3	4	3	2	1
4. Recognize how a specific course relates to the entire curriculum.	3	4	3	2	1
5. Understand how the hospitality industry works.	3	4	3	2	1
6. Comprehend research methodology and procedures.	3	4	3	2	1
7. Recognize current hospitality industry needs.	3	4	3	2	1
8. Understand the current needs and wants of the consumer.	3	4	3	2	1
9. Appreciate trends and concerns in education.	3	4	3	2	1
10. Understand the impact of decision making.	3	4	3	2	1
1. Recognize how public policy, current legislation and legal responsibilities affect the hospitality industry.	3	4	3	2	1
2. Appreciate current learning theories.	3	4	3	2	1
3. Possess a high degree of knowledge in a specific content area.	3	4	3	2	1
4. Understand curriculum theory and planning.	3	4	3	2	1
5. Possess a knowledge of basic business disciplines.	3	4	3	2	1
6. Possess a knowledge of international business.	3	4	3	2	1
7. Understand theories and methods of student evaluation and assessment.	3	4	3	2	1
8. Possess a knowledge of component parts of the hospitality industry.	3	4	3	2	1
9. Recognize the educational political structure.	3	4	3	2	1
10. Comprehend the importance of pedagogy.	3	4	3	2	1
1. Understand human development and behavior and their impact on the learning process.	3	4	3	2	1
2. Recognize the impact of technological change on hospitality education	3	4	3	2	1
3. Comprehend how to communicate ideas orally and in writing	4	4	3	2	1

	essential	very important	important	not very important	not important at all
24. Recognize hospitality industry leaders.	5	4	3	2	1
25. Perceive the hospitality industry based upon work experience.	5	4	3	2	1
26. Recognize the relationship of faculty with alumni.	5	4	3	2	1
27. Recognize the relationship of faculty with advisory boards.	5	4	3	2	1
28. Know of career opportunities for students.	5	4	3	2	1
29. Recognize student expectations.	5	4	3	2	1
30. Recognize employer expectations.	5	4	3	2	1
31. Understand the importance of continuous professional growth.	5	4	3	2	1
32. Understand the helistic relationship between hospitality industry, education, and multi-cultural issues.	5	4	3	2	1
33. Perceive possible future directions for hospitality education.	5	4	3	2	1
34. Recognize the interaction of the hospitality industry upon economic climate.	5	4	3	2	1
35. Recognize how social conditions interact with the hospitality industry.	5	4	3	2	1
36. Understand organizational/administrational theory.	5	4	3	2	1

(OVER)

**Skill Competencies:**

	essential	very important	important	not very important	not important at all
1. Use microcomputers and software related to hospitality.	5	4	3	2	1
2. Communicate effectively via writing and speaking.	5	4	3	2	1
3. Advise and counsel students.	5	4	3	2	1
4. Plan and organize instruction.	5	4	3	2	1
5. Design and use evaluation instruments.	5	4	3	2	1
6. Recognize individual differences in students.	5	4	3	2	1
7. Provide instruction according to individual differences.	5	4	3	2	1
8. Relate theory to practical application.	5	4	3	2	1
9. Speak to a variety of audiences at their level.	5	4	3	2	1
10. Design and conduct research studies.	5	4	3	2	1
11. Interpret and disseminate data obtained.	5	4	3	2	1
12. Guide research of students.	5	4	3	2	1
13. Select and evaluate appropriate microcomputer software.	5	4	3	2	1
14. Perform basic culinary skills.	5	4	3	2	1
15. Use motivational techniques to increase student performance.	5	4	3	2	1
16. Speak a foreign language.	5	4	3	2	1
17. Relate industry experiences to classroom instruction.	5	4	3	2	1
18. Communicate with and relate to a variety of relevant non-student publics (e.g., administrators colleagues, community).	5	4	3	2	1
19. Use audio-visual equipment.	5	4	3	2	1
20. Ability to relate current references to course content.	5	4	3	2	1
21. Use a variety of instructional techniques and methods in order to develop student skills.	5	4	3	2	1
22. Exhibit interpersonal skills.	5	4	3	2	1
23. Promote higher level thinking and reasoning among students.	5	4	3	2	1

	essential	very important	important	not very important	not important at all
24. Provide leadership within the profession and the classroom.	5	4	3	2	1
25. Use appropriate statistical skills.	5	4	3	2	1
26. Exhibit basic hotel management skills (e.g., rooms division, sales, housekeeping).	5	4	3	2	1
27. Exhibit flexibility and adaptability.	5	4	3	2	1
28. Use good listening skills.	5	4	3	2	1
29. Publish articles and/or textbooks.	5	4	3	2	1
30. Promote hospitality education programs.	5	4	3	2	1
31. Plan curriculum/program.	5	4	3	2	1
32. Possess a sense of humor.	5	4	3	2	1
33. Resolve student complaints.	5	4	3	2	1
34. Implement organizational and time management skills.	5	4	3	2	1
35. Solve diverse problems.	5	4	3	2	1

(OVER)

For the following learning experiences which have been identified by the Delphi panel, please circle a number from 1 - 5 to indicate how appropriate you consider each for acquiring or gaining the competencies.

very appropriate  
quite appropriate  
fairly appropriate  
not very appropriate  
not appropriate at all

**Learning Experiences:**

1. Work in the industry.	5	4	3	2	1
2. Serve in the capacity as a consultant.	5	4	3	2	1
3. Participate actively in professional organizations.	5	4	3	2	1
4. Conduct empirical research.	5	4	3	2	1
5. Publish articles, books, etc.	5	4	3	2	1
6. Participate in conferences/workshops/seminars.	5	4	3	2	1
7. Intern under or observe knowledgeable teachers (e.g., Teaching Assistant).	5	4	3	2	1
8. Continue self-education.	5	4	3	2	1
9. Participate in taking field trips.	5	4	3	2	1
10. Participate in a managerial experience in a profit responsibility situation.	5	4	3	2	1
11. Take courses or maintain contact with subject matter specialists.	5	4	3	2	1
12. Serve on advisory committees.	5	4	3	2	1
13. Establish a network with other professionals and community groups.	5	4	3	2	1
14. Participate in public policy procedures.	5	4	3	2	1
15. Evaluate own teaching through video-taping analysis and peer feedback.	5	4	3	2	1
16. Participate in a travel experience.	5	4	3	2	1
17. Participate in a classroom experience.	5	4	3	2	1
18. Read current professional publications.	5	4	3	2	1
19. Interact with educational colleagues.	5	4	3	2	1

**Knowledge Competencies:**

**Skill Competencies:**

**Learning Experiences:**

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The following knowledge and skill competencies and learning experiences were mentioned only once by the Delphi panel participants and therefore were not included in the questionnaire.

In the spaces provided on the questionnaire, please write in any from this list you feel should be added to the questionnaire.

Knowledge Competencies:

Understand group dynamics.  
Exhibit commitment needed to become an effective educator.  
Use community resources effectively.  
Recognize population changes.  
Recognize student demographics.  
Counsel new faculty members.  
Develop industry partnerships.  
Appreciate the role of the casino hotel.  
Appreciate the role of the convention hotel.  
Appreciate the role of the resort hotel  
Possess a terminal degree in business or education.

Skill Competencies:

Develop educational materials.  
Relate to persons as equals.  
Work with and attract females into the field of hospitality education.  
Deal with students on an affective level.  
Relate with other faculty.  
Possess empathy for the student.  
Retain customers.  
Train employees.

Learning Experiences:

Keep a daily Journal.  
Develop computer software.  
Plan to complete a doctorate degree.

Please note:

Do not return this section with your completed questionnaire as the postage stamped on the enclosed envelope is sufficient only for the questionnaire.

Iowa State University of Science and Technology



Ames, Iowa 50011-1120

Department of Hotel, Restaurant,  
and Institution Management  
11 MacKay Hall  
Telephone 515-294-1730

August 7, 1989

Approximately two weeks ago I mailed you the Round II questionnaire for my Delphi study. Just in case you have forgotten to complete the questionnaire, this is a reminder asking you to complete and mail it as soon as possible but no later than August 15, 1989.

Please disregard this reminder if you have already returned the questionnaire. I am enclosing another stamped addressed envelope for your convenience in this matter. Thank you very much for your time and assistance with the the study.

Sincerely,

John Canterino, M.S.  
Principal Investigator



APPENDIX E

ROUND III

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After considering your previous rating and the Round II modal rating of the Delphi panel, circle your new rating in the column entitled "Your new rating." If your new rating is more than one category away from the modal rating please briefly summarize your reason for disagreeing with the majority in the column entitled "Reason." If your new rating is only one category away from, or the same as the modal rating, no reason is needed.

EXAMPLES:	Your previous rating	Round II modal rating	Your new rating					Reason
Knowledge of hospitality subject matter	3	5	5	4	③	2	1	(indicate reason)
Knowledge of the impact of professional associations on hospitality education	2	4	5	4	③	2	1	(no reason needed)

For the following competencies, please circle a number from 1-5 to indicate how important you consider each for an effective hospitality educator.

	Your previous rating	Round II modal rating	Your new rating					Reason
			Essential	Very Important	Important	Not very important	Not important at all	
Knowledge Competencies:								Write in this column only if your new rating is more than one category from the modal rating
1. Comprehend changing trends in the hospitality industry.		5	5	4	3	2	1	
2. Discern current research in hospitality education and related fields.		4	5	4	3	2	1	
3. Understand trends in specific content area.		5	5	4	3	2	1	
4. Recognize how a specific course relates to the entire curriculum.		5	5	4	3	2	1	
5. Understand how the hospitality industry works.		5	5	4	3	2	1	
6. Comprehend research methodology and procedures.		4	5	4	3	2	1	
7. Recognize current hospitality industry needs.		4	5	4	3	2	1	
8. Understand the current needs and wants of the consumer.		4	5	4	3	2	1	
9. Appreciate trends and concerns in education.		4	5	4	3	2	1	
10. Understand the impact of decision making.		4	5	4	3	2	1	
11. Recognize how public policy, current legislation and legal responsibilities effect the hospitality industry.		4	5	4	3	2	1	
12. Appreciate current learning theories		3	5	4	3	2	1	

	Your previous rating	Round II modal rating	Your new rating					Reason
			Essential	Very Important	Important	Not Very Important	Not Important at all	
Knowledge Competencies:								
13. Possess a high degree of knowledge in a specific content area.		5	5	4	3	2	1	Write in this column only if your new rating is more than one category from the modal rating
14. Understand curriculum theory and planning.		3	5	4	3	2	1	
15. Possess a knowledge of basic business disciplines.		3	5	4	3	2	1	
16. Possess a knowledge of international business.		3	5	4	3	2	1	
17. Understand theories and methods of student evaluation and assessment.		3	5	4	3	2	1	
18. Possess a knowledge of component parts of the hospitality industry.		3	5	4	3	2	1	
19. Recognize the educational political structure.		3	5	4	3	2	1	
20. Comprehend the importance of pedagogy.		3	5	4	3	2	1	
21. Understand human development and behavior and their impact on the learning process.		3	5	4	3	2	1	
22. Recognize the impact of technological change on hospitality education.		3	5	4	3	2	1	
23. Comprehend how to communicate ideas orally and in writing.		5	5	4	3	2	1	
24. Recognize hospitality industry leaders.		3	5	4	3	2	1	
25. Perceive the hospitality industry based upon work experience.		4	5	4	3	2	1	
26. Recognize the relationship of faculty with alumni.		3	5	4	3	2	1	
27. Recognize the relationship of faculty with advisory boards.		4	5	4	3	2	1	
28. Know of career opportunities for students.		4	5	4	3	2	1	
29. Recognize student expectations.		4	5	4	3	2	1	
30. Recognize employer expectations.		4	5	4	3	2	1	
31. Understand the importance of continuous professional growth.		5	5	4	3	2	1	

	Your previous rating	Round II modal rating 127	Your new rating					Reason	
			Essential	Very important	Important	Not very important	Not important at all		
Knowledge Competencies:									
32. Understand the holistic relationship between hospitality industry, education, and multi-cultural issues.		4	5	4	3	2	1	Write in this column only if your new rating is more than one category from the modal rating	
33. Perceive possible future directions for hospitality education.		4	5	4	3	2	1		
34. Recognize the interaction of the hospitality industry upon economic climate.		4	5	4	3	2	1		
35. Recognize how social conditions interact with the hospitality industry.		3	5	4	3	2	1		
36. Understand organizational/administrational theory.		3	5	4	3	2	1		
The following knowledge competencies were chosen most frequently from the list of additional statements which was included in the Round II questionnaire. <u>Circle a number</u> from 1-5.									
37. Understand group dynamics.			5	4	3	2	1		
38. Possess a terminal degree in business or education.			5	4	3	2	1		
<u>Skill Competencies:</u>									
1. Use microcomputers and software related to hospitality.		3	5	4	3	2	1		
2. Communicate effectively via writing and speaking.		5	5	4	3	2	1		
3. Advise and counsel students.		4	5	4	3	2	1		
4. Plan and organize instruction.		5	5	4	3	2	1		
5. Design and use evaluation instruments.		4	5	4	3	2	1		
6. Recognize individual differences in students.		4	5	4	3	2	1		
7. Provide instruction according to individual differences.		4	5	4	3	2	1		
8. Relate theory to practical application.		5	5	4	3	2	1		
9. Speak to a variety of audiences at their level.		4	5	4	3	2	1		
10. Design and conduct research studies.		4	5	4	3	2	1		
11. Interpret and disseminate data obtained.		4	5	4	3	2	1		

	Your previous rating	Round II modal rating 128	Your new rating					Reason
			Essential	Very important	Important	Not very important	Not important at all	Write in this column only if your new rating is more than one category from the modal rating
Skill Competencies:								
12. Guide research of students.		3	5	4	3	2	1	
13. Select and evaluate appropriate microcomputer software.		3	5	4	3	2	1	
14. Perform basic culinary skills.		2	5	4	3	2	1	
15. Use motivational techniques to increase student performance.		4	5	4	3	2	1	
16. Speak a foreign language.		3	5	4	3	2	1	
17. Relate industry experiences to classroom instruction.		4	5	4	3	2	1	
18. Communicate with and relate to a variety of relevant nonstudent publics (e.g., administrators, colleagues, community).		3	5	4	3	2	1	
19. Use audio-visual equipment.		3	5	4	3	2	1	
20. Ability to relate current references to course content.		4	5	4	3	2	1	
21. Use a variety of instructional techniques and methods in order to develop student skills.		4	5	4	3	2	1	
22. Exhibit interpersonal skills.		4	5	4	3	2	1	
23. Promote higher level thinking and reasoning among students.		4	5	4	3	2	1	
24. Provide leadership within the profession and the classroom.		4	5	4	3	2	1	
25. Use appropriate statistical skills.		3	5	4	3	2	1	
26. Exhibit basic hotel management skills (e.g., rooms division, sales, housekeeping).		3	5	4	3	2	1	
27. Exhibit flexibility and adaptability.		4	5	4	3	2	1	
28. Use good listening skills.		4	5	4	3	2	1	
29. Publish articles and/or textbooks.		4	5	4	3	2	1	
30. Promote hospitality education programs.		4	5	4	3	2	1	
31. Plan curriculum/program.		3	5	4	3	2	1	
32. Possess a sense of humor.		4	5	4	3	2	1	
33. Resolve student complaints.		3	5	4	3	2	1	

	Your previous rating	Round II modal rating 129	Your new rating					Reason
			Essential	Very important	Important	Not very important	Not important at all	
Skill Comptencies:								
34. Implement organizational and time management skills.		3	5	4	3	2	1	Write in this column only if your new rating is more than one category from the modal rating
35. Solve diverse problems.		3	5	4	3	2	1	
<u>Learning Experiences:</u>								
1. Work in the industry		5	5	4	3	2	1	
2. Serve in the capacity as a consultant.		3	5	4	3	2	1	
3. Participate actively in professional organizations.		4	5	4	3	2	1	
4. Conduct empirical research.		4	5	4	3	2	1	
5. Publish articles, books, etc.		4	5	4	3	2	1	
6. Participate in conferences/workshops/seminars.		4	5	4	3	2	1	
7. Intern under or observe knowledgeable teachers (e.g., Teaching Assistant).		4	5	4	3	2	1	
8. Continue self-education.		5	5	4	3	2	1	
9. Participate in taking field trips.		3	5	4	3	2	1	
10. Participate in a managerial experience in a profit responsibility situation.		4	5	4	3	2	1	
11. Take courses or maintain contact with subject matter specialists.		4	5	4	3	2	1	
12. Serve on advisory committees.		4	5	4	3	2	1	
13. Establish a network with other professionals and community groups.		3	5	4	3	2	1	
14. Participate in public policy procedures.		4	5	4	3	2	1	
15. Evaluate own teaching through video-taping analysis and peer feedback.		3	5	4	3	2	1	
16. Participate in a travel experience.		3	5	4	3	2	1	
17. Participate in a classroom experience.		3	5	4	3	2	1	
18. Read current professional publications.		5	5	4	3	2	1	
19. Interact with educational colleagues.		5	5	4	3	2	1	

	Your previous rating	Round II modal rating	Your new rating				Person	
			Very Important	Important	Not very Important	Not important at all	Write in this column only if your new rating is more than one category from the modal rating	
<p>Learning Experiences:</p> <p>The following learning experience was chosen most frequently from the list of additional statements which was included in the Round II questionnaire. Please <u>circle a number</u> from 1-5.</p> <p>20. Plan to complete a doctorate degree.</p>			5	4	3	2	1	

In order that I may describe a profile of the Delphi panel, I am asking you to respond to the following questions. Your name will not be associated with specific details

131

1. Highest degree earned: \_\_\_\_\_ year: 19\_\_
  2. Position within your department or college: \_\_\_\_\_
  3. How many years have you held this position? \_\_\_\_\_ years.
  4. How many years have you been a practicing hospitality educator? \_\_\_\_\_ years.
  5. Have you been an editorial board member of a professional journal? ☐ yes ☐ no  
If "yes" please name the journal(s): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  6. Have you held an official position in a state or national professional organization? ☐ yes ☐ no  
If "yes" please name the organization(s): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  7. Have you been offered an award for outstanding scholarship or teaching? ☐ yes ☐ no
  8. How often do you publish your research or other writing?  
☐ less than once each year  
☐ about once each year  
☐ less than two years  
☐ two years or more
  9. How often do you present papers at conferences or seminars?  
☐ less than once each year  
☐ about once each year  
☐ less than two years  
☐ two years or more
  10. Do you consider yourself an outstanding hospitality educator? ☐ yes ☐ no
  11. May I include your name as a member of the Delphi panel in the Appendix of my dissertation? ☐ yes ☐ no
-



Iowa State University of Science and Technology



Ames, Iowa 50011-1120

Department of Hotel, Restaurant,  
and Institution Management  
11 MacKay Hall  
Telephone 515-294-1730

September 11, 1989

Approximately two weeks ago I mailed you the Round III questionnaire for my Delphi study. Just in case you have forgotten to complete the questionnaire, this is a reminder asking you to complete and mail it as soon as possible but no later than September 20, 1989.

Please disregard this reminder if you have already returned the questionnaire. I am enclosing another stamped addressed envelope for your convenience in this matter. Thank you very much for your time and assistance with this study.

John Canterino, M.S.  
Principal Investigator

APPENDIX F

OTHER APPENDICES

Iowa State University of Science and Technology



Ames, Iowa 50011-1120

Department of Hotel, Restaurant,  
and Institution Management  
11 MacKay Hall  
Telephone 515-284-1173

September 30, 1989

Dear Hospitality Educator:

I am writing to thank you for your support and co-operation during doctoral research at Iowa State University. It is because of individuals like yourself that helps to foster the growth of new knowledge in the hospitality industry, whereby all may benefit. Once again, thank you for the encouragement to see this study reach a "fruitful" conclusion.

John Canterino, M.S.  
Principal Investigator

Hospitality Educators Who Served As Delphi Panel Members

Susan Baker  
University of Houston  
Houston, TX

Frank Borsenik  
University of Nevada-Las Vegas  
Las Vegas, NV

Harsha Chacko  
University of New Orleans  
New Orleans, LA

Peter D'Souza  
University of Wisconsin-Stout  
Menomonie, WI

Joseph Durocher  
University of New Haven  
Durham, NH

Morton Fox  
University of Hawaii-Manoa  
Honolulu, HI

Nick Hadgis  
Widener University  
Wilmington, DE

Jafar Jafari  
University of Wisconsin-Stout  
Menomonie, WI

Lee Kruehl  
Purdue University  
West Lafayette, IN

Ken McCleary  
Virginia Polytechnic University  
Blacksburg, VA

Phillip McGuirk  
University of Wisconsin-Stout  
Menomonie, WI

Michael Olsen  
Virginia Polytechnic University  
Blacksburg, VA

Gary Page  
Grand Valley State College  
Allendale, MI

David Pavesic  
Georgia State University  
Atlanta, GA

Dennis Rutherford  
Washington State University  
Pullman, WA

Claire Schmelzer  
University of Kentucky  
Lexington, KY

John Sherry  
Cornell University  
Ithaca, NY

Marian Spears  
Kansas State University  
Manhattan, KS

Hospitality Educators Who Served As Delphi Panel Members (continued)

John Steffanelli  
University of Nevada-Las Vegas  
Las Vegas, NV

Terry Umbreit  
Washington State University  
Pullman, WA

Joe West  
Florida State University  
Tallahassee, FL

**INFORMATION ON THE USE OF HUMAN SUBJECTS IN RESEARCH  
IOWA STATE UNIVERSITY**

(Please follow the accompanying instructions for completing this form.)

1. Title of project (please type): Necessary Competencies and Learning Experiences for Hospitality Educators: A Delphi Study

2. I agree to provide the proper surveillance of this project to insure that the rights and welfare of the human subjects are properly protected. Additions to or changes in procedures affecting the subjects after the project has been approved will be submitted to the committee for review.

John Canterino

Typed Name of Principal Investigator

Date

Signature of Principal Investigator

4 MacKay Hall

4-4865

Campus Address

Campus Telephone

3. Signatures of others (if any)      Date      Relationship to Principal Investigator

4. ATTACH an additional page(s) (A) describing your proposed research and (B) the subjects to be used, (C) indicating any risks or discomforts to the subjects, and (D) covering any topics checked below. CHECK all boxes applicable.

- ☐ Medical clearance necessary before subjects can participate
- ☐ Samples (blood, tissue, etc.) from subjects
- ☐ Administration of substances (foods, drugs, etc.) to subjects
- ☐ Physical exercise or conditioning for subjects
- ☐ Deception of subjects
- ☐ Subjects under 14 years of age and (or) ☐ Subjects 14-17 years of age
- ☐ Subjects in institutions
- ☐ Research must be approved by another institution or agency



5. ATTACH an example of the material to be used to obtain informed consent and CHECK which type will be used.

- ☐ Signed informed consent will be obtained.
- ☒ Modified informed consent will be obtained.

6. Anticipated date on which subjects will be first contacted:      Month      Day      Year

4      15      80

Anticipated date for last contact with subjects:

3      1      90

7. If Applicable: Anticipated date on which audio or visual tapes will be erased and/or identifiers will be removed from completed survey instruments:

Month      Day      Year

8. Signature of Head or Chairperson      Date      Department or Administrative Unit

9. Forward to the University Committee on the Use of Human Subjects in Research

☒ Project Approved

☐ Project not approved

☐ No action required

## ACKNOWLEDGMENTS

The author wishes to acknowledge the immeasurable support and guidance of Thomas Walsh and Sally Williams throughout this study. Aside from being able advisors and researchers, they were friends to "lean upon" during the difficult times. Appreciation is also extended to my Program of Study Committee; Larry Ebbers, Mary Huba, and Jerelyn Schultz, who provided worthwhile feedback that enabled this study to reach its conclusion. A special note of recognition to Nancy Brown for aptly "sitting in" whenever called upon during this study. Thanks to Dori Finley for input and "time off" to work on this study. Sincere thanks to the many wonderful people at Iowa State University whose encouragement went a long way in helping to complete this study. Gratitude is expressed to the members of the Delphi panel individually and collectively, for without your support this study would never have been completed. Finally, a special thanks to my wife and children for the many "missed meals and movies" in order that this study may reach a successful conclusion; I love each and everyone of you.